

American Fruit Grower

WESTERN EDITION

MAY • 1958



He Gets Cash-on-the-Spot
for His Apples

World's Pecan Empire

Starter Solutions and Peach
Replants

Plums as an Extra Crop

Small Fruits Issue: Varieties • Root Systems • Grading

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 (Less than 0.2%)

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MEMPHIS, TENNESSEE



Hart Nelson (right) checks the tight field schedule with employee Bruno Toschi.

"FIRESTONES SAVE US TIME AND MONEY!"

says Hart O. Nelson, Madera, California.

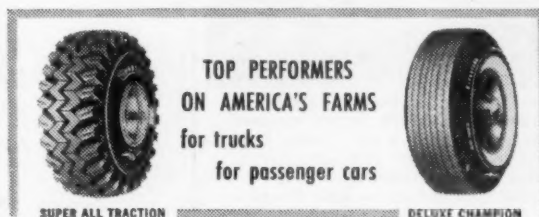
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American Fruit Grower

*Cover photograph, by John Staby,
shows close-up of strawberries.*

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No. 5

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Treatment	Percentage Mildew Control					
	1 week		2 weeks		3 weeks	
	Va.	Cal.	Va.	Cal.	Va.	Cal.
8 oz./100 gals.	98.4	99.2	87.0	91.5	75.0	76.6
Check (captan)	0.0	0.0	0.0	0.0	0.0	0.0

The tests were conducted on Rome Beauty apples.

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LETTERS TO THE EDITOR

Back on the Track

Dear Editor:

I have read with much interest your editorial in the March issue, "Can Railroads Get Back on the Track?" You have expressed very concisely the problem and cure for the railroad industry.

The railroads need greater freedom to price their services and they need relief from monopolistic regulations laid down over 50 years ago.

Most of the local shipments of fruits and vegetables have been lost through the Agricultural Exemption Act. This act, originally designed to permit farmers to haul their products to market without restrictions, has now passed into hauling by commercial haulers.

Since public service bodies rule and regulate the railroads entirely and competitive forms of transportation only partially or not at all, it becomes a public problem as well as a railroad problem. We hope that a solution may be found before it is too late.

Rochester, N. Y. O. B. Price
New York Central System

Windfalls Appreciated

Dear Editor:

Henry Bailey Stevens' columns on India were enjoyed by our family and we would like to hear from him again on his next trip.

Mr. Stevens' column, *Windfalls*, is always delightful, informative, kind, and colorful.

Indialantic, Fla. A. Burghart

Nut Grower Writes

Dear Editor:

I would like to contact Carl Weschcke, author of *Growing Nuts in the North*, a book for sale by you.

I'm in total ignorance of the economic factors concerning hazelnut production in the North Central states.

Climatically speaking, I like the Midwest better than the two-season West Coast; hence my desire to move back. Filbert production out here is financially rewarding at times but at best there is still a 2000-mile freight bill to pay.

Woodburn, Ore. Leonard Ramlo
Carl Weschcke's address is Hazel Hills Nursery Co., 96 S. Wabasha St., St. Paul, Minn.—Ed.

Peach Growers, Please Note!

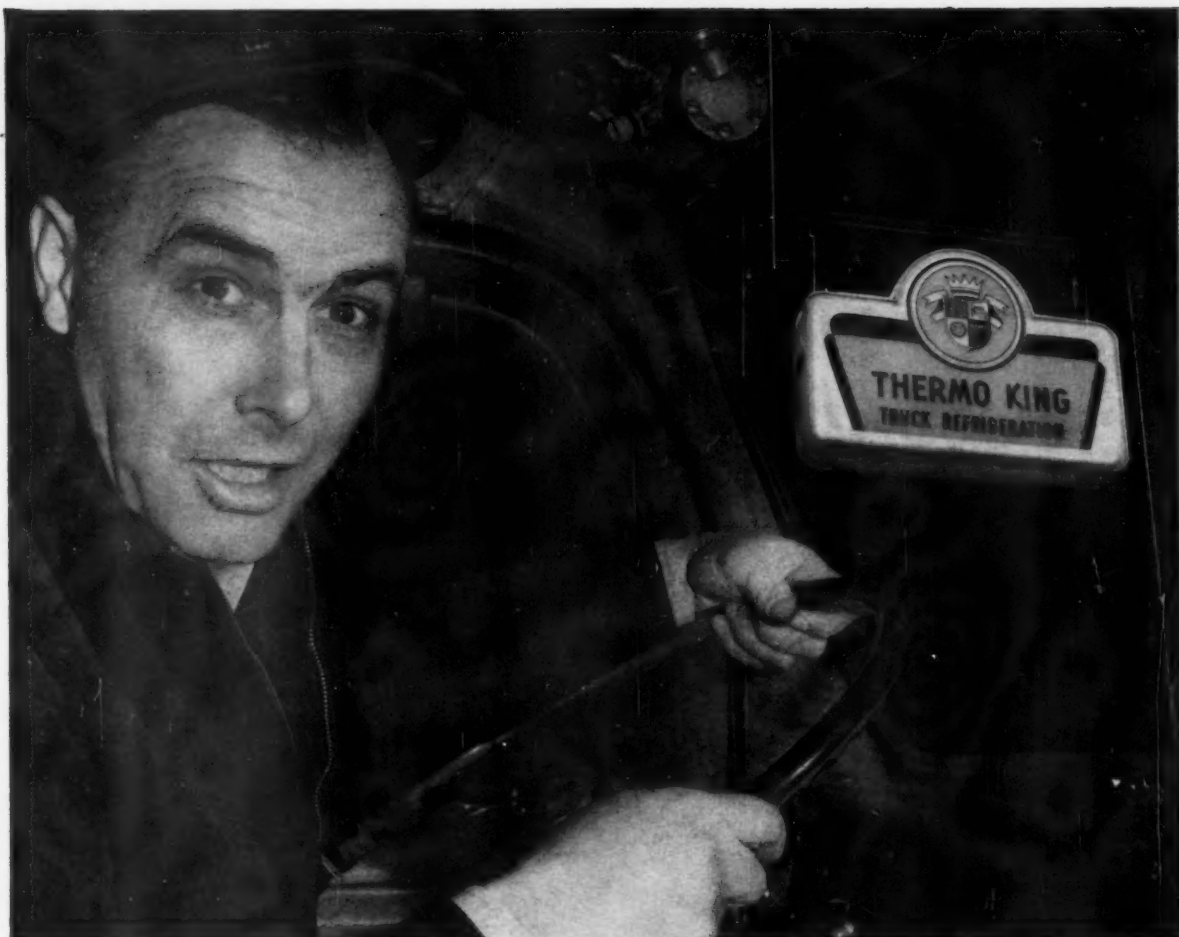
Dear Editor:

Your editorial on Peach Royal suggests to me that while developing that idea you could work to improve the peach flavor in ordinary commercial ice cream. I used to order peach ice cream but in recent years I seldom order it because the peaches used are green and flavorless. Why not put up over-ripe peaches for flavoring?

Boulder, Colo. A. B. D.

The Gillespie County (Texas) Peach Growers Association has already hit upon this use for their over-ripe peaches. They make peach puree from fruit that is too ripe to ship and sell it to a San Antonio ice cream plant (see AMERICAN FRUIT GROWER, August, 1957, page 20).

AMERICAN FRUIT GROWER



That's the sixth Thermo King service sign I've passed today!

I'm a trucker. I haul perishables, and that's no picnic. But one thing I'm sold on: that's Thermo King service. Their Service Stations cover the truck routes like a blanket. In fact, that's the sixth "Factory Authorized Service" sign of theirs I've passed since my last coffee stop.

I know from experience that those fellows inside really know their business—'been trained back at the factory. The last time I stopped for service, they had me out in less time than it took to have a piece of pie and a cup of coffee. Why,

they had a whole wall full of factory parts and replacement units ready to keep me rolling. Those guys are the best dog-gone insurance against loss of time and delay that I have. Besides, just knowing they're there keeps me from getting a nervous stomach.

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And here are more Chevrolet features that keep costs down. Powerful short-stroke V8 engines are more economical than ever . . . and the improved 6's are still money-saving champs that get the most out of a gallon of gas. Every Chevy is a big-load hauler—with the new Fleetside series offering the greatest load space of any comparable low-priced pickup.

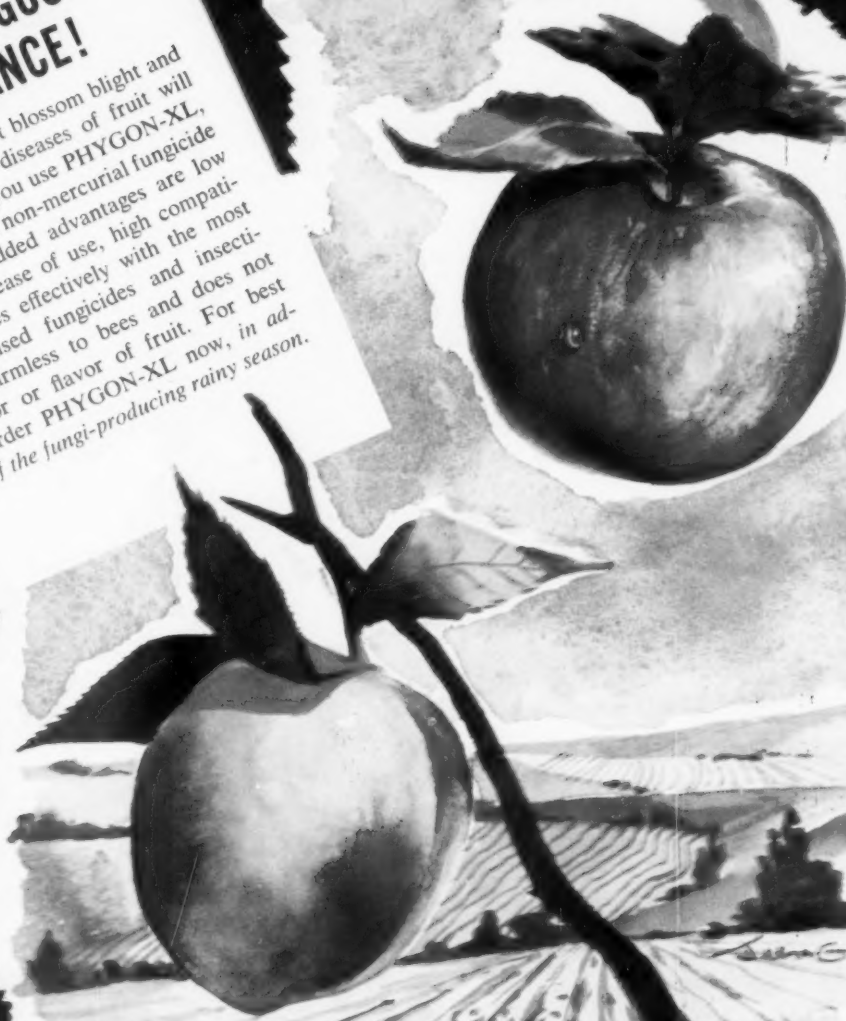
With the right hustle and muscle, Chevrolet trucks can be counted on to stay on the job and save on the job. See the Fleetside—see them all at your Chevrolet dealer's today. He'll show you the right truck for your job. . . . Chevrolet Division of General Motors, Detroit 2, Michigan.

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**American
Fruit Grower**

• Fruit for Health •



He Gets . . .

CASH ON THE SPOT *For His* APPLES

**Pick-Your-Own program draws thousands
of consumers to Chicago area orchard**

By FRANK H. EMERSON
Purdue University

JOHN Bell, Mossley Hill Orchard, Barrington, Ill., is one of the first growers to develop the "pick-your-own" method for the sale of apples.

The Bell orchard consists of 100 acres of apples and is located at the intersection of routes 12, 22, and 63, about 35 miles northwest of Chicago. Highway U.S. 12 is a heavily traveled, four-lane route from the Chicago area to the northern Illinois and southern Wisconsin lake and resort area.

The entire orchard is planted to four varieties: McIntosh, Starking Delicious, Jonathan, and Golden Delicious. The trees are all 23 years old, quite vigorous, and pruned by a system designed to bring the height down, over a period of years, to approximately 14 to 15 feet so that customers may pick their fruit entirely from stepladders.

The 1957 apple crop in Bell's orchard was a beautiful sight. The trees were heavily loaded but size was very good as a result of the abnormally heavy rainfall. Insect and disease control was almost perfect. The red varieties were beautifully

colored, even on fruits borne on the inner and lower limbs. Golden Delicious fruits were slightly russeted in some areas of the orchard but this was common throughout the Midwest in 1957.

Bell's entire pick-your-own pro-



Customers stopping at the Mossley Hill Orchard roadside stand pictured at top, left, often return to pick their own apples, as shown above.

gram is built upon a mailing list of some 6000 names which was started in the summer of 1956. The list is made up of customers who stop at Bell's roadside stand, and names of persons who come out to pick their

own fruit for the first time are added.

The address of each customer is placed on a stencil which is used on an addressograph machine to facilitate sending information to such a large list.

One letter is sent in December to extend Christmas greetings and express appreciation of past business. A second letter is mailed out just ahead of full bloom to invite customers out for the bloom period. Just before harvest, a final letter is sent to notify customers that the fruit is ready to be picked and giving approximate harvest dates for each variety. Included in this letter is a small pamphlet on "Apple Varieties and Their Uses" and a small card which "permits" the bearer to enter the orchard to pick fruit.

Last year an extra card of different color was enclosed which the recipient was "allowed" to give to one close friend who would like to pick apples.

This practice of "allowing" persons to come out and pick their own fruit is reflected in the comments of the customers, who are grateful for the privilege and ask that they be allowed to come again. Many inquire if they may bring a friend.

Each car is checked into the
(Continued on page 34)



Florida 90 strawberries growing on the Griffin Brothers farm.

They Grow Strawberries for the *Winter Market*

In the competitive Florida strawberry industry
these growers have been a success for many years

By ELDON S. BANTA

GRIFFIN Brothers have been growing strawberries for 30 years near Dover, Fla., and have never missed a crop. Each year their yields have been right up at the top in their area.

"You have to be on your toes down here, if you expect to make money and stay in the strawberry business," says O. M. Griffin, who grows winter berries for northern markets.

One of their recent and profitable changes was a switch to the new Florida 90 variety. Yields of this variety went up around 8000 quarts per acre, about twice what they formerly got with Missionary. The berries are large, attractive, long, easy to pack, and ship and carry well. Now they raise all Florida 90 on their 10½ acres of berries, and they also grow plants for sale.

To assure the arrival of their berries on northern markets in the best of condition, the Griffins changed crates several years ago. They turned to the new wirebound crate that holds 24 pints. Designed by P. D. Walden, strawberry shipper in Dover, the crate was developed through Package Research Laboratory. It reduces bruising and cutting of berries. The old divider that rested on the berries is replaced with wood strips held up by cleats on the ends of the crate. The Griffins are packing all their berries in this crate now. Shippers like the crate, too.

In 1947 the Griffins started fumigating strawberry beds for nematode control, another development that has brought them increased yields and a

more profitable business. They use from 5 to 8 gallons of D-D per acre applied to each row two weeks before setting plants. A tank on the tractor carries the fumigant, and application is made as the beds or ridges are made, all in one operation. In Florida all berries are set on beds or ridges.

Another big factor in strawberry production in Florida is soil management. In preparing a field the Griffin brothers start off with 1000 pounds of castor bean pumice per acre applied 30 days before planting to raise the organic level of their sandy soil. The first fertilizer application goes on there weeks after plants are set and consists of 400 pounds of 4-8-8 plus 100 pounds of nitrate of soda placed between the rows. Planting is done in the fall between October 6 and 15.

Six weeks after the first fertilizer application a second goes on, 800 pounds of 4-8-8 per acre this time. A third dose is given the planting about January 1 when harvest just begins. This time 300 pounds of 3-8-8 and 100 pounds of muriate of potash per acre are applied. In mid-February the final fertilizer application is made of 400 pounds of 3-8-8 per acre. All told, this makes 2100 pounds of fertilizer per acre in addition to the castor bean pumice from the castor oil plant.

Spraying is a must on the Griffin farm, since there are about 14 different insect pests that bother strawberries in Florida. Fortunately only two or three are serious enough to require regular spraying. Red spiders, Pamerases, and lesser cornstalk borers are the most common, but flower thrips, mole crickets, and cutworms often do considerable damage.



Twin row system of planting is used by Griffin Brothers. This requires about 25,000 plants per acre. Fields are bedded and ridged, and plants are set mechanically on the beds. Beds are 48 inches from middle to middle; plants are set 10 to 14 inches apart in twin rows 12 inches apart. At left are irrigation sprinklers; at right are oil heaters used for frost control.



O. M. Griffin shows 24-pint wirebound crate he uses for berries. Top layer of boxes is supported by slats resting on cleats on ends of crate, reducing bruising and cutting of berries.

Soon after planting the Griffins give their berries their first DDT spray, using a 25% emulsion with 1 quart per 100 gallons of water. Two more applications follow every two weeks, and this pretty well controls borers and Pamerases.

In January and February two applications of Vapo-tone (TEPP) or parathion emulsion are given plantings for the control of red spiders. Diseases are not often a problem in bearing acreage, but in plant-raising beds anthracnose, rhizoctonia bud rot, and leaf spot diseases are sometimes problems.

Water is another essential on the Griffin farm. From wells 110 feet deep they pump hundreds of thousands of gallons of water onto berry fields every winter and spring.

By careful attention to all the details of strawberry culture the Griffin Brothers have stayed right at the top in a competitive business. **THE END.**

AMERICAN FRUIT GROWER



State REPORTS

WESTERN EDITION

My 50 Years of Fruit Growing

HAVING retired after 50 years as a fruit grower in the Yakima Valley, raising apples and soft fruits, I wonder if a backward look at the industry, showing its marvelous growth and development, might not have some interest to oldtimers and to newcomers too.

In 1908 the fruit industry was small but enthusiastic. There had been good prices. Real estate men used the slogan, "Ten Acres Enough!" A 10-acre apple orchard was supposed to give a family a comfortable living, with light, pleasant work for the owner. So there began a tree planting campaign that has made the state the largest producer of apples in the nation.

When my wife and babies and I arrived in the Valley on April 1, a half century ago, we found it a raw country. Homes were without piping or wiring. Rural electricity was not available until many years later. Roads were deep with dust in the summer, mud in the winter. All transportation and farm work was horse-drawn.

What a change in orchard methods has occurred! Fifty years ago irrigation was by the furrow system. Wooden flumes down the hogbacks were followed, later, by water under pressure in underground pipe. Then in '46 the sprinkler system, now used generally was introduced. At first, cultivation after every irrigation was practiced.

Two pests were sprayed for—scale and worms. For scale, lime sulfur. But boughten lime sulfur was expensive, so I made a vat and cooked lime and sulfur, stirring with a hoe among clouds of



Jesse Childs, who pioneered fruit growing in the Yakima Valley, retired in the late fall of 1957, at the age of 82. He is a former president of Washington State Horticultural Association, is currently making his home in Oregon.—Ed.

stinging steam. After a mess was done, I hitched up the horses to the sprayer and put it on the trees.

What a change in sprayers! At first a barrel sprayer was used, with one man pumping, another squirting the material on the little trees. Then power sprayers were introduced with bamboo rods equipped with flat vermored-type nozzles. Then the gun. Next came a great development, supposed to be the final one—the stationary sprayer, universal all over the state. Now with the air-blast sprayer and the airplane, one man quickly does the work of many.

In the old days worms were not a serious problem. On Prof. Melander's advice I used, successfully, ½ pound arsenate of lead to the hundred, and laid up the sprayer early in August. But the worms became resistant. Heavy doses with oil followed. The idea was to put an impervious coating of lead and oil on the apple that the worms couldn't penetrate—but they did!

The Pure Food and Drugs Administration moved in. It seems we were poisoning the hapless populace! So we must wash the apples in two baths, one of hot alkali to cut the oil, which nearly cooked the apples, then an acid bath to remove arsenic. Then rinse. Then chemical analysis. The coming of DDT was a great relief. But DDT is becoming ineffective and the worms are slowly getting more difficult to control.

These changes came about slowly. But the present era is a bewildering ferment of changes. The fork-lift has limited the handling of individual boxes. But has it not made obsolete the older storages? And will growers pick in bins instead of boxes? Can the smaller growers afford all the expensive machinery now needed?

Trees themselves are changing. The coming of bud sports with heightened color was a favorable development. But what of the grower with a productive orchard of the older strains? Now in Delicious the sports have sported, giving a confusion of double reds. Which is best? Will the spurred type of Delicious supplant all others? How about dwarfs and semi-dwarfs on Malling roots? This new marketing agreement: will it be a boon to the grower or spell ruin?

With all these perplexing problems it was time for the old man to quit and let the young fellows solve them. He never got rich, but he made a living under God's bright sun and blue skies and among green growing things.

Jesse C. Childs



- Virginia Passes Legislation to Increase Apple Tax
- Washington Apple Growers Pushing for Marketing Agreement

New Apple Legislation

VIRGINIA—Two new apple promotion measures passed by Virginia State Legislature become effective with the 1958 crop.

The legislation enables apple producers of the state to tax themselves at a higher rate—4 cents per bushel—than in previous years on graded apples sold for fresh consumption.

The second measure applies a tax of 2 cents per crate on apples sold ungraded for fresh consumption and 4 cents per hundred pounds on apples sold to processors of 2 1/4 inches up of No. 1 Canner Grade and better.

Funds derived from these measures will enable the State Apple Commission to greatly expand the promotion and advertising of Virginia apples.

URGE MARKETING PLAN

Apple growers of Okanogan County, Washington, recently passed a resolution urging that steps be taken to draft an apple marketing agreement.

At a recent meeting 200 Okanogan County growers were told that a marketing agreement can incorporate any number of features that they might wish. It can be set up by a two-thirds favorable vote of growers in a referendum and can be ended at any time by a majority vote.

Robert Eaton, USDA marketing agreement specialist, explained to the growers that marketing agreement committee, comprised of elected growers, each season would set up the regulation on grade, quality, and other factors governing that season. These regulations would end at the close of that season, he said.

Meetings in other Washington state apple-producing areas have been held under the auspices of a special committee of Washington State Horticultural Association.

Roadside Marketing Workshops

NEW JERSEY—Growers brushed up on ways to attract and keep customers at workshops sponsored recently by Rutgers University Agricultural Extension Service.

The first session for north Jersey stand owners was held in Mountain View, and the second, with an identical program, took place in Hammonton.

R. B. Donaldson, extension marketing specialist, Pennsylvania State University, talked on psychology and consumer motivation as applied to roadside marketing.

The list of speakers included Herbert W. Voorhees, president of New Jersey Farm Bureau, which is conducting an educational program to improve roadside markets. Samuel H. Christy, Jr., senior inspector with State Department of Weights and Measures, explained regulations about containers. John Hendrickson, of Wagon Wheel Market, Middletown, told growers what customers look for at a roadside stand.

Other speakers covered such topics as record-keeping, refrigeration, location and promotion.

Spray-Hand Combinations

CALIFORNIA—Sutter County prune growers are studying combinations of spray and hand operations to get better

fruit size, less limb damage and dieback, and reduced packing and dehydration costs.

Fred Petersen, farm advisor, reports both methods have advantages and will be essential operation in better years. Yuba city area spray growers were plagued again this year with rains which followed immediately after application of the spray.

The studies show that under good weather conditions, spray thinning is the better method because application is cheaper, \$8 to \$12 per acre, compared with \$25 to \$75 per hand thinning.

Fruit at pit-hardening stage on spray-thinned trees was 15 to 20% larger in size than fruit ready for hand thinning. Hand removal at this stage increases ultimate size of fruit only 7 to 10%.

The biggest advantage in hand thinning is in preventing dieback.

Tests on seven-year-old trees showed thinning reduced acreage yield by a half ton of fruit. The 30 to 50 fruit-per-pound size increased from 6 to 25%, and the 90 plus sizes dropped from 27 to 12%.

Costs in taking the thinned crop of 2.88 tons per acre to the processor totaled \$257.50, compared with \$315 for the unthinned crop of 3.94 tons.—Neale Leslie.



HEADS APPLE COMMISSION

Cragg Gilbert, left, Yakima, recently-elected chairman of Washington State Apple Commission, receives gavel from Otto Ross, Grondo, who has served as chairman past two years. G. E. Thayer, Oroville, was named vice-president.

Dwarf Tree Association

MICHIGAN—More than 300 growers from six midwestern states organized a dwarf fruit tree association at a recent meeting at Hilltop Orchards, Hartford. Growers represented Minnesota, Wisconsin, Illinois, Kentucky, Indiana, as well as Michigan.

William Heuser, host, was named president, and Dr. R. F. Carlson, Michigan.—(Continued on page 39)

FRUIT PEST HANDBOOK

(SIXTY-FOURTH OF A SERIES)

GRAPE FLEA BEETLE

THE grape flea beetle, a dark blue, shiny beetle about 3/16-inch long, occurs throughout the Mississippi Valley eastward to the Atlantic Coast. It is most commonly a pest of wild and cultivated grapes but has been reported to attack other fruits, including apples, pears, plums, and quinces. Injury is due to the feeding of both the adults and the larvae. The adults kill the buds by eating out their centers early in the spring and the larvae, small brown worms with black spots and about 1/4-inch long when full grown, feed on the upper surface of the leaves, skeletonizing them.

This insect overwinters in the adult stage in debris in or near vineyards. It appears on the vines in the spring just as the buds are swelling. As the secondary shoots develop the eggs are deposited largely in cracks in the bark, but also at the base of buds, between bud scales, and on the leaves. The eggs hatch in a few days and the larvae feed for three or four weeks, then drop to the ground and pupate in the soil. Adults emerge a week or two later and feed until they enter hibernation in the fall. There is but one generation a year. Infestation is usually confined to local areas in a vineyard, especially that part of the vineyard near woods and buildings.

Control—Spray with DDT, 2 pounds of a 50% wettable powder in 100 gallons of water, just as the buds are swelling or when the shoots are 6 to 8 inches long.—Howard Baker, USDA.

Photos show grape flea beetle at top and grape leaf A-maced by flea beetle larvae. Photos courtesy USDA.





CHECKMATE FOR MITES

KELTHANE

Cleared for full-season use

Residue tolerances have been established for KELTHANE that, in general, permit its use throughout the season, as needed for efficient mite control.

This is good news for everyone who has the problem of keeping mite populations at low levels. KELTHANE is the best all-round miticide ever developed. Only KELTHANE gives you all these advantages:

- Fast initial kill
- Long residual activity
- Control of most species
- Safety on crops and to operators when used as directed
- Harmless to beneficial insects

Solve your mite-control problems with KELTHANE . . . fast-acting, long-lasting *checkmate* for mites. Ask your supplier for additional information.

MAY, 1958



Chemicals for Agriculture
**ROHM & HAAS
COMPANY**

WASHINGTON SQUARE, PHILADELPHIA 5, PA.

Representatives in principal foreign countries

KELTHANE is a trade-mark, Reg. U.S. Pat. Off. and in principal foreign countries.

**One Man and One Tractor
can hoe
1000 trees a day!**



with a TM-100 TREE MULCHER

Designed to fit the needs of any fruit grower, the HARROMATIC TM-100 with one or two circles around the trees clearly cultivates—mulches even the toughest grass sod thoroughly!

The 32" cutting head extends 5' from rear tractor wheel, permits mulching right up to the tree trunk.



with a TM-400 TREE MULCHER

The HARROMATIC TM-400 attaches easily and quickly to all tractors with 3-point or 2-point hydraulic lift.

32" or 42" cutting heads are available. Hinged head permits mulcher to follow contours . . . even works on banks or terraced orchards or groves. Folds for easy transport. Get the facts on how a HARROMATIC Tree Mulcher can save you work—time—and money!

MULCHER DEVELOPED FOR CITRUS TREES ALSO AVAILABLE

Send coupon to Dept. 1 for Details

Please send full information on the TM-100 and TM-400 HARROMATIC TREE MULCHERS.

Name _____

Address _____

Town _____ State _____

No. of acres of orchards _____

DEALER INQUIRIES INVITED

The HARROMATIC Corp.
Shippensburg, Pennsylvania



Al Martin inspects bumper crop resulting from cultural methods that consider root system.

Grapes

Looking Underground

EVERY grape grower knows the growth and fruiting habits of the Concord grape variety—aboveground. However, it is easy to forget that 50% of the plant is underground. This root system merits attention as well as the top growth.

Planting, fertilizing, and cultivation all exert their influence on the root system. Closely-planted vines do not have the room to expand and develop as fully as those adequately spaced. Improper fertilizer placement may result in wasted materials. Frequent deep tillage cuts off the primary feeder roots in the surface soil.

Grape culture methods on the loess hills of southwest Iowa are similar to those used elsewhere in the country. That is, some vineyards are planted and tilled irrespective of the slope. This practice results in water and soil losses and soil depletion. More recently planted vineyards are on the contour or are terraced for maximum soil maintenance and yields. The terraced system leaves an area that is not tilled any time after planting. This raises the question of fertilizer application and incorporation.

It was on a terraced vineyard at Bluffs Experimental Fruit Farm that an investigation of the root system of Concord grapes was undertaken by Iowa Agricultural Experiment Station. The reason for the study was to analyze the fertilizer application methods used in experimental work. However, the results were

significant for both research men and commercial growers.

Roots of six-year-old grape vines on fertile soil spaced 8 x 10 feet had grown to a maximum distance of 22 feet. Other roots grew vertically to a depth of 14.5 feet. Although the heaviest concentration of feeder roots was in the surface foot, the dense network of roots had permeated the upper 6 feet of soil.

On a less fertile soil, the horizontal root growth was 24.2 feet, but vertical penetration was only 9.5 feet. Here the majority of feeder roots were in the surface soil which contained some organic matter and applied fertilizers.

The extensive root system explains the difficulty of establishing a new plant in a bearing vineyard because of competition. The root system is fairly uniform and does not exhibit preference for direction of



Portion of root system of a six-year-old vine.

AMERICAN FRUIT GROWER

Resistant insects... now a spreading problem

**DDT and DDD-tolerant pests highlight
importance of phosphate insecticides**

*A service advertisement
prepared by the manufacturers
of malathion insecticide.*

WHILE COVERAGE and timing problems still account for much poor control, resistant insects are becoming responsible for a greater percentage of control failures.

In 1954, resistant codling moth appeared in the Midwest. It has now appeared in other apple growing areas. In the last three years, DDD-resistant red-banded leaf roller has spread through New York State. Infestations in 1957 were particularly severe.

Photo courtesy N.Y. State Agricultural Experiment Station.



Switch to phosphates

To control these adaptable pests, growers have switched to the phosphates... particularly malathion. In New York, for example, malathion controlled both broods of resistant red-banded leaf roller, with two applications for each brood. Where these sprays overlapped codling moth cover sprays, codling moth too, was controlled.

Other advantages

A malathion-based schedule offers additional advantages. It controls aphids, mites, plus other major fruit pests. Its low toxicity to man and animals eliminates need for the respirator and protective clothing required when applying most other phosphates. It also eliminates residue problems in close-to-harvest insect control... application can be made on most fruits up to 72 hours from harvest. And many fine-finish programs specify malathion because it offers a wide margin of safety to fruit and foliage of sensitive apple varieties such as McIntosh and Cortland.

Formulations

Malathion formulations are available under the brand names of many well-known manufacturers. The basic chemical was developed by American Cyanamid Company, Phosphates and Nitrogen Division, New York 20, New York.

Red-banded leaf roller damage. Malathion controls both first and second broods of this resistant pest. Use two sprays for each brood.



News about new "CRAG" SEVIN insecticide has already reached many growers through farm magazines and Experiment Station test reports. Several years of performance testing have shown definite values for SEVIN in apple insect control. Limited quantities of SEVIN are now available for the first time to experienced growers for experimental use only.

SEVIN is a carbamate insecticide, a new and different chemical for insect control. It is unlike the chlorinated hydrocarbons, the phosphates, the arsenicals, and other groups of chemicals used against insects.

SEVIN has controlled more than 100 different insect pests. Especially effective against codling moth, SEVIN also controls all other major apple insects. Of special interest is the fact that SEVIN controls some insects which are resistant to commonly-used insecticides. Where mites are a problem, a miticide should be used in addition to SEVIN.

SEVIN is safer to handle than many other insecticides and is less toxic to warm-blooded animals than DDT. It can be used on apples up to a week before harvest.

Because SEVIN controls a wide range of insects, it should be a help in simplifying spray programs. It is compatible with most commonly-used fungicides and miticides. However, highly alkaline materials such as lime reduce its efficiency and should not be used in combination with SEVIN.

"CRAG" SEVIN is now available as a 50% wettable powder for experienced growers who wish to use it experimentally on part of their orchard this year. For a free folder giving detailed information on how to use SEVIN insecticide,

Mail the Coupon now!

UNION CARBIDE CHEMICALS COMPANY

Division of Union Carbide Corporation
30-20 Thomson Avenue
Long Island City 1, New York



Please send me your free illustrated folder on SEVIN
Experimental Insecticide, including directions for use.

NAME _____

ACRES IN APPLES _____

ADDRESS _____

CITY _____ STATE _____

(F-40359)

"Crag", "Sevin", and "Union Carbide" are trade marks of Union Carbide Corporation.

growth in relation to the slope. Thus, fertilization on the lower side of the vine is as important as above the vine. The fertilizer does not have to be applied to the entire surface area, but can be picked up by roots from band applications.

It was observed that a band of plowed-under phosphate fertilizers and decomposing rye cover crop was being heavily infiltrated by feeder roots. Harry Martin, manager of Council Bluffs Grape Growers Association, commented that the roots were feeding in this zone like a herd of cattle at the feed bunk.

Al Martin, assistant manager of the association and manager of 45 acres of grapes, has changed his cultural and fertilizer methods somewhat since this study. He feels that a band application of fertilizer (nitrogen and phosphorus in this area) worked into the soil adjoining the row is highly successful.

Seeing the number of roots in the surface soil has caused the plow to be banished from his vineyard. Shallow cultivation is now practiced with a disk and culticutter. Since the reason for failure to secure stands of replacement vines is understood, extra applications of water and nutrients are made when planting a young vine in an old vineyard.

Other growers in the area also have adopted some of these ideas into their system of culture. They feel that the band application of fertilizers and shallow cultivation have increased their yields. The knowledge that roots are deep into the subsoil has lessened their worry about drought. They still wonder, however, about the extent of the root system of a mature grape vine after seeing that of a six-year-old vine.—C. C. Doll, Bluffs Experiment Fruit Farm, Council Bluffs, Ia.

KELTHANE APPROVED

THE go-ahead signal has been given to the use of Kelthane miticide, according to Rohm & Haas Co., Philadelphia, Pa. Official residue tolerances were established last month by Food and Drug Administration.

Fruit and nut crop clearances are summarized below:

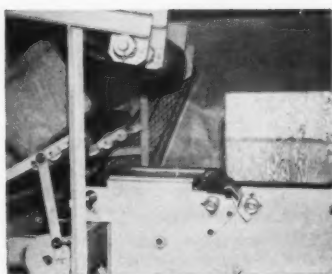
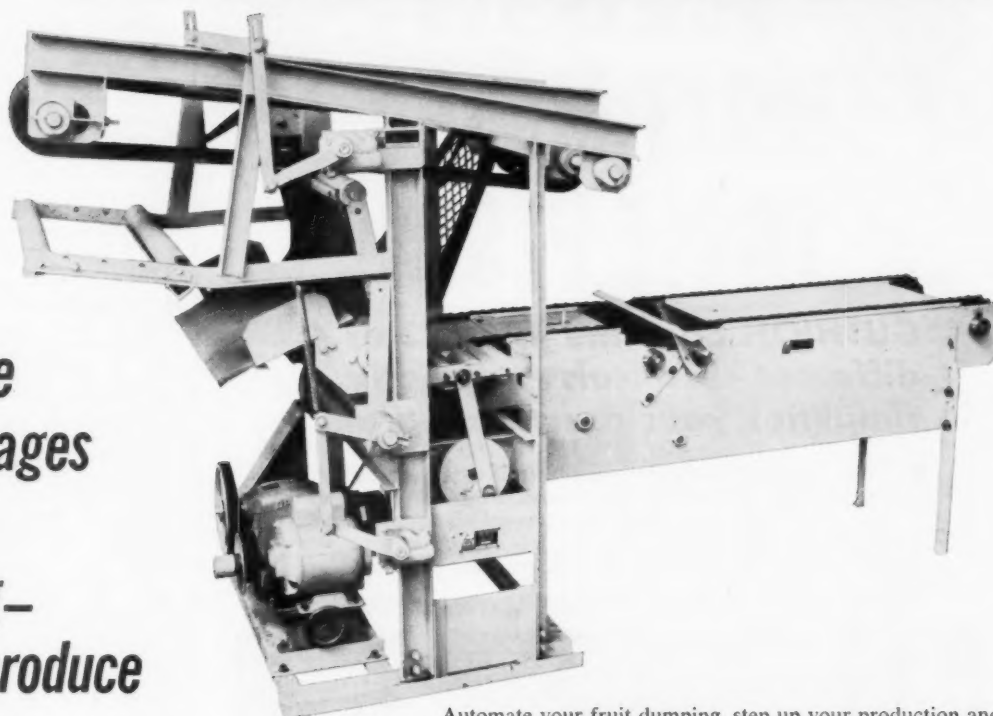
CROP	DAYS TO HARVEST
Apples, pears, cherries, plums, prunes, figs, grapes, citrus	7
Strawberries, raspberries, and other cane fruits	2
Peaches, apricots, nectarines, walnuts, pecans, almonds—use before nut formation	14

Kelthane is compatible with all pesticides commonly used on fruit. On deciduous fruit, it will be most useful in: 1) Early season sprays to clean up European red or clover mites and to prevent buildup of two-spotted and similar types. 2) Summer sprays to control the two-spotted complex, rust mites, and other species.

fmc

Single Box Fruit Feeder

***Eliminate
the damages
of hand
dumping—
handle produce
gently,
automatically!***



As each box is emptied and cleared, a full box automatically moves onto the lifting platform. Safe, sure, gentle handling at each step of the way — your guarantee of a better conditioned fruit, a more salable fruit.

Automate your fruit dumping, step up your production and profits! The automatic FMC Single Box Fruit Feeder sets a new high in dumping speed and gentle fruit handling. Rather than *spilling* the fruit onto the conveyor, as in manual dumping, the FMC Single Box Fruit Feeder *rolls* it on—no bruising, no piling up. The FMC Single Box Fruit Feeder handles all types of fruit; is designed to accommodate the six most popular-sized field boxes. The standard FMC Single Box Fruit Feeder empties and discharges boxes at a rate of from 4 to 12 per minute; it can be factory equipped to handle from 2 to 14 boxes per minute. Only one unskilled operator is required to tend the FMC Feeder; it requires no pits or special installation consideration. Its semi-portability enables it to be installed anywhere in your plant without necessitating shut downs. Speed your production, lower your costs, decrease fruit damage—you can do it all with the FMC Single Box Fruit Feeder!

Putting Ideas to Work



**FOOD MACHINERY AND CHEMICAL
CORPORATION
Florida Division**

GENERAL SALES OFFICES: LAKELAND, FLORIDA
PLANTS: LAKELAND, FLA.—WOODSTOCK, VA.

BD-58-1

MAY, 1958

FOOD MACHINERY AND CHEMICAL CORPORATION
FLORIDA DIVISION, Fairway Ave., Lakeland, Fla.

Please send me complete information on the FMC Single Box Fruit Feeder.

NAME _____

COMPANY _____

ADDRESS _____ RFD No. _____

CITY _____ ZONE _____ STATE _____

GUTHION[®] ALONE CONTROLS MOST MAJOR FRUIT PESTS

GUTHION does the job of 3 or 4 different chemicals . . . greatly simplifies your control program

GUTHION puts an end to complicated fruit spray schedules . . . makes possible for the first time simplified fruit pest control. You no longer need three or four different chemicals, because GUTHION wettable powder does the job alone. GUTHION alone effectively controls virtually all major fruit insect pests!

COMPARE THESE TWO APPLE INSECT CONTROL SCHEDULES

TYPICAL SCHEDULE WITH CONVENTIONAL INSECTICIDES			Simplified GUTHION Schedule
Application	Insects	Chemicals	
PETAL FALL	Codling Moth, Curculio, Leaf Rollers, Sawfly, Leaf Miner, Red Bugs, Mites, Aphids	Parathion 15% Dieldrin 50%	GUTHION alone
FIRST COVER	Codling Moth, Curculio, Leaf Rollers, Leaf Miner, Red Bugs, Mites	Parathion 15% Dieldrin 50%	GUTHION alone
SECOND COVER	Codling Moth, Leaf Rollers, Curculio	DDT 50%, TDE 50%, Parathion 15%	GUTHION alone
THIRD COVER	Codling Moth, Mites, Aphids	DDT 50%, Aphicide, Miticide	GUTHION alone
FOURTH COVER	Apple Maggot, Codling Moth, Leaf Rollers, Fruit Worm, Aphids	Lead Arsenate, DDT 50%, TDE 50%, Aphicide, Miticide	GUTHION alone
FIFTH COVER	Apple Maggot, Codling Moth, Mites, Curculio	Lead Arsenate, DDT 50%, Miticide, Parathion 15%	GUTHION alone
SIXTH & SEVENTH COVER	Codling Moth, Leaf Rollers	DDT 50% TDE 50%	GUTHION alone

GUTHION keeps insects under control better between sprays, too, because GUTHION stays on the job . . . keeps working from one cover spray to the next. GUTHION wettable powder is recommended for the "all-season" control of fruit pests on apples, crab apples, pears, peaches, nectarines, apricots and quinces. Ask your Farm Supply Dealer!

GUTHION

A PRODUCT OF

CHEMAGRO



"Chemicals for Agriculture—Exclusively!"

MARKETING

AN AMERICAN FRUIT GROWER REPORT

Novel Idea

HERE is a novelty idea which may strike pay dirt for those who have roadside stands or who operate pick-your-own programs.

Have your customers address, to themselves, 2-cent government postal cards. The following season, when the crop is ready, mail the postal cards with your sales message on the back.

The postal card, addressed in the customer's own handwriting, creates unusual attention value—and you may be sure it will be read.

Roll Up Your Sleeves

TAKE a look at how the Michigan retail trade exploited the apple to maintain sales at produce counters. Faced with shortages of fresh fruits and vegetables due to the Florida freeze and the strong export market, retailers focused attention on the apple. They advertised it, promoted it, and merchandised it—chalking up record sales at a good profit.

Realizing what can be done to increase demand for the apple, a spokesman for Michigan Apple Growers & Storage Association urges members to "roll up our sleeves and create that demand for apples. We cannot sit back and depend upon a Florida freeze, a European freeze, or any other calamity to help our apple demand."

Worth Repeating

DESPITE the good prices and the favorable demand for peaches in the 1957 season, the industry learned some marketing lessons which are worth repeating.

Small, 1¾-inch peaches did not pay their way. In South Carolina last summer, under the highest market prices for No. 1 peaches, 1¾-inch peaches could not be shipped at a profit. Only 2-inch and up mature peaches were profitable to ship. Quality fruit of the size the consumer wants makes a good market.

Mark Boatwright, retiring president of National Peach Council, is the authority for this statement: "We are being forced to quality," he reports, "and the next step is consistent, effective promotion to tell the nation when it's peach-time, U.S.A."

Herald C-A Season

A HEAVY barrage of trade paper, direct mail, and point-of-sale advertising by New York & New England Apple Institute heralded the 1958 controlled-atmosphere marketing season.

The campaign was continued from week to week to build and maintain a high level of buyer interest in C-A apples. To assist buyers and brokers in contacting sources of supply, all ads carried name, address, and telephone number of C-A operators and sales agents who are institute members and who requested such listing.

Opening in February of Michigan's first C-A storage owned by Vern Bull, of Casnovia, stimulated interest in a series of meetings of growers interested in C-A storage. These sessions resulted in a valuable exchange of ideas, informa-

AMERICAN FRUIT GROWER

tion and marketing data, and ended in formation of a traffic association. Through efforts of Michigan State Apple Commission, C-A apple storage market information will be furnished to participating growers as a guide in helping them arrive at sales decisions.

The Time Is Approaching

LOOK for a closer liaison between the three major apple promoting organizations, namely, National Apple Institute, International Apple Association, and National Apple Week, Inc.

The reason is twofold. Not only is the grower being solicited from three sources for the same work, but there is discontent in some quarters over the size of the national apple promotion program.

There is very little promotion of apples through national consumer advertising, such as over radio, on TV, and in the national magazines. The real reason is lack of funds.

For the past several years, National Apple Institute has had a budget of around \$100,000 for national promotion. This money has been stretched to the limit to produce the "Gateway to Health" movie which tells about the need for apples in dental health; advertising in eight of the leading medical journals; three projects at colleges on research; production of a master apple cookbook; and publicity releases for newspapers, magazines, radio, and TV food specialists.

It is the belief in some quarters that a closer liaison between the three organizations may provide better planning, but that it won't solve the basic problems. Big money, in the millions, is needed to create an effective national consumer promotional program. Western apple growers have adequate funds. It is up to growers in the East and Midwest to make a more adequate contribution. Better organization and better understanding of marketing problems on the part of these growers mean the day is not far distant when the money will be forthcoming.

CALENDAR OF COMING MEETINGS & EXHIBITS

May 1-2—31st Annual Shenandoah Apple Blossom Festival, Mrs. Jean James Demorest, Publicity Director, Winchester, Va.

May 11-14—Processed Apples Institute, Inc., 7th annual meeting, Seaview Country Club, Absecon, N. J.

May 25-28—Super Market Institute, Atlantic City, N. J.—Institute headquarters, 500 N. Dearborn St., Chicago 10, Ill.

June 12—Small Fruits Day, Ohio Agricultural Experiment Station, Wooster.

June 14—Fourth Annual Long Island Strawberry Festival, Mattituck, N. Y.

June 19-20—National Apple Institute annual meeting, Yakima, Wash.; June 21-22—tour.—Truman Nold, Exec. Sec'y, Washington Bldg., Washington 5, D. C.

June 25-27—Entomological Society of America, Pacific branch, 42nd annual meeting, El Cortez Hotel, San Diego, Calif.

July 17—Pennsylvania, West Virginia, Maryland and Virginia state horticultural societies combined summer meeting, Moore and Dorsey properties, Berryville, Va.—John F. Watson, Sec'y, Staunton.

July 28-30—International Apple Association 64th Annual Convention, Queen Elizabeth Hotel, Montreal, Canada.—Association headquarters, 1302 18th St., N. W., Washington 6, D. C.

August 12-13—Ohio Pesticide Institute, Ohio Agricultural Experiment Station, Wooster.

August 14—Orchard Day, Ohio Agricultural Experiment Station, Wooster.

Aug. 20—Purdue University departments of horticulture and plant pathology Orchard Day, Purdue University, W. Lafayette, Ind.—R. B. Tukey, Assoc. in Horticulture, Purdue University.

MAY, 1958



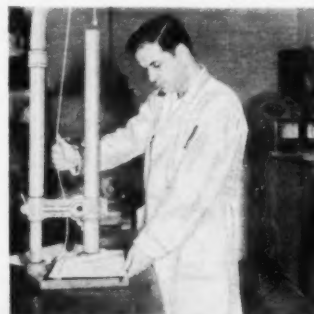
A Myers **EXCLUSIVE:**

"Fire cured" Epoxy coating adds years to sprayer tank life!

By virtually eliminating rusting, flaking and peeling, Myers Epoxy undercoating gives sprayer tanks up to twice the life... cuts tank maintenance costs as much as 50%.

Epoxy is applied directly and "Fire Cured" on specially prepared steel tank surfaces. It forms a durable coating that resists all types of penetration. Tanks are then finished with a coat of tough baked enamel.

Only Myers offers this excellent tank protection. It's one more reason why you'll enjoy extra dependability — extra profit — when you spray with Myers. Stop in or call your Myers dealer soon.



RESISTS FIELD IMPACT DAMAGE—Epoxy undercoating withstands far greater impacts, far more bumps and jolts than ordinary tank undercoatings. This was proved in controlled laboratory impact tests, confirmed in field "torture" tests.



SPRAY CHEMICALS CAN'T ATTACK IT—Due to its neutral composition, Epoxy passes every corrosion test... is undamaged by months of immersion in the most corrosive chemicals in sprayer use today.



LIKE AN ELASTIC "GLOVE"—In tests like these, Epoxy was proved far more flexible than ordinary tank coatings. Epoxy "adjusts" to stresses and strains... won't break if tank is dented.

Myers® POWER SPRAYERS

WATER SYSTEMS AND IRRIGATION PUMPS

THE F. E. MYERS & BRO. CO.

8205 Orange Street • Ashland, Ohio
Kitchener, Canada



ORTHO Field Reports:



Highest quality fruit with **ORTHOCIDE (captan)**

say leading fruit growers



"We consider ORTHOCIDE the best general fungicide on the market.

"We have used ORTHOCIDE exclusively for the past five years and consider it the best general fungicide on the market. The finish on Baldwins and Delicious has been particularly good. Our scab control has been excellent."

From a field interview with Mr. Donald K. McLeod, McLeod Bros. Orchard, Milford, New Hampshire.



"Premium market price for ORTHOCIDE-treated apples. As manager of Hardin Fruit Co., I have had the opportunity to make comparisons on the qualities of the apples that we pack and ship. I have found that ORTHOCIDE-treated apples are the best in over-all quality. Some of our markets specify ORTHOCIDE program grown apples and are willing to pay us the top premium market price for them. We never have any problems with color, size, nor keeping qualities with ORTHOCIDE grown apples."

From a field interview with Mr. Ted Schumann, Manager, Hardin Fruit Co., Hardin, Ill.



"ORTHOCIDE gives excellent color and finish. We are using ORTHOCIDE and VAPOPHOS in a complete ORTHO program on peaches. This complete program that we have used for the past five years gives us excellent color and finish which is desired by the consumer. The compatability of ORTHO

products combined with their research and field service certainly is a big help to us in producing high quality fruit."

From a field interview with Mr. Louis Caggiano, General Manager, South Carolina Div., Sunny Slope Farms.

Don't delay—start an ORTHO program today!

These reports are just a few of hundreds received from leading fruit growers who have found that ORTHOCIDE (captan) in an ORTHO program helps them grow better quality fruit. And, remember, only ORTHOCIDE, a superior formulation of

captan, provides: (1) Exceptionally fine particle sizes. (2) Better sticking, wetting, and spreading agents. (3) Superior carrying agents. (4) Compatibility with the full ORTHO line of insect and disease control products.



Helping the World Grow Better

California Spray-Chemical Corp.
A subsidiary of California Chemical Company
Scientifically trained Fieldmen
located in all the Nation's fruit growing areas.

District Offices: Haddonfield, N.J.; Springfield, Mass.; Medina, N.Y.;
Columbia, S. C.; Orlando, Fla.; Maumee, Ohio; Memphis, Tenn.;
Shreveport, La.; Maryland Heights, Mo.; Portland, Ore.; Phoenix, Ariz.;
Salt Lake City, Utah; Sacramento, Fresno, San Jose, Whittier, Calif.

T. M. REG. U. S. PAT. OFF. ORTHOCIDE VAPOPHOS • ON ALL CHEMICALS, READ DIRECTIONS AND CAUTIONS BEFORE USE



**"Styrofoam helped us build first-class cold storage
for \$2.00 per stored box"—Drew Fruit Farms**

"In my newest cold storage warehouse for apples, I felt Styrofoam® would provide a long lasting, completely satisfactory unit," says Mr. Ben Drew, owner of Drew Fruit Farms, Westford, Mass. "One that would cost less to erect and less to maintain. After three seasons, my experience with Styrofoam has been favorable in all these respects.

"Using Styrofoam, we were able to construct a first-class storage area for less than \$2.00 per stored box. This cost includes refrigeration equipment and installation of electricity.

"As it does not absorb moisture, Styrofoam does not require

a vapor barrier. This saved us the expense of putting a moisture-proof material around the outside of the insulation. In spite of the wide range of outside temperatures, Styrofoam maintains the proper storage temperature of 31°-32° F. without undue strain on our refrigeration equipment.

"In my operation, Styrofoam has proven itself as an insulation material for apple storage."

For more information about Styrofoam® (a Dow plastic foam) and its use in fruit storage applications, write to THE DOW CHEMICAL COMPANY, Midland, Mich., Dpt. PL-1916N-1

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YOU CAN DEPEND ON



AMERICAN FRUIT GROWER



Unyielding water resistance— **STYROFOAM®** for pipe covering insulation

Low-temperature pipe covering made of Styrofoam® does an excellent job and lasts a lifetime. Its unyielding resistance to moisture and its permanent low thermal conductivity prevent condensation and dripping—reduce heat transfer.

Styrofoam will not crack or split from changing temperature and it is not subject to ice buildup around valves. It's lightweight and easy to apply—requires no maintenance. A complete line of pipe and vessel covering made from Styrofoam is available from a number of fabricators. For their names and more information, write to THE DOW CHEMICAL COMPANY, Midland, Michigan, Plastics Sales Department PL-1916N-1.

*STYROFOAM is a registered trademark
of The Dow Chemical Company



Apples and Pears

Apple Buyers Wary

INTERNAL breakdown plagued apple growers this past season. It not only made quite a dent in their pocketbooks, but also made buyers wary, particularly of Stayman in the East.

Internal breakdown consists of a breaking down and browning of the interior of the apple, sometimes only on one side or surrounding a bruise, sometimes through the flesh, and quite often in a central area surrounded by a ring of normal tissue. Apple flesh affected by internal breakdown is usually mealy.

The skin of affected fruits may be normal in appearance and thus apples can be shipped to market with little realization that they are worthless.

The trouble occurs most often on Jonathan, Stayman, Rome Beauty, and certain summer varieties that quickly become overripe. Delicious, Baldwin, and Rhode Island Greening are also frequently affected.

Longtime appleman, Carroll R. Miller, secretary-manager of Appalachian Apple Service, reports that internal breakdown the past season may have robbed growers of \$1 million because of the lower price received for Staymans. "When Staymans are suspect," he reports, "their price inclines to drop to a forced-sale level, which in turn tends to drag downward prices of other varieties. Too often the trade will turn to other areas for their apple supplies as safer purchases."

What can be done? Internal breakdown occurs most often on large size, overmature apples and on those that have been forced late in the season. It is sometimes the result of holding the fruit on the trees too long, waiting for color, and often can be traced to delay in cooling the fruit after it has been harvested, or to the fact that the fruit has been held in storage at too high a temperature or beyond its regular season. Internal breakdown also often follows water core.

The amount and seriousness of internal breakdown varies from year to year, apparently being dependent to a large extent upon growing conditions.

There's no real understanding of just what factors cause internal breakdown to be a serious problem one season and not another.

"The losses are serious enough to warrant the most thorough investiga-

tion," reports Carroll Miller. Combining the talents of research people in the four or five states most directly involved would be a wise move. Growers in the states affected are well organized and can start action through state-grower organizations.

Promising Pear Varieties

ALTHOUGH Bartlett is the leading pear variety in the East, several new promising varieties have been developed by fruit breeders at New York State Experiment Station, Geneva, and elsewhere.

Among these is Chapin, a seedling of Seckel, introduced by the station in 1946. An early dessert variety for home fruit planting and the roadside stand, Chapin ripens early in August and can be picked over a long season. Fruit is medium sized, attractive, juicy, and of good flavor.

Two seedlings of Bartlett developed at the station also show promise, according to Robert C. Lamb, station pomologist. One of these, NY 7620, may replace Clapp Favorite since it ripens with that variety but keeps longer. The other selection, NY 4885, ripens a week later than Bartlett, is very productive, and has large-sized fruits.

Gorham, another Bartlett type introduced by the station in 1923, is being grown to lengthen the Bartlett season.

Later varieties include Ewart, which originated in East Akron, Ohio, and Dumont. Ewart is a large-fruited, productive variety that keeps in storage until December. Dumont, an attractive, high quality, European pear, is recommended more for home use until its productiveness can be determined.

Planting stocks of these and other new varieties are available from New York State Fruit Testing Association, Geneva.

FUNGICIDE RESULTS

THE *Results of 1957 Fungicide Tests*, published under the sponsorship of American Phytopathological Society, is now available.

The publication may be obtained for \$1.00 per copy from Dr. A. B. Groves, Department of Plant Pathology and Physiology, Winchester Fruit Research Laboratory, R.R. 3, Winchester, Va. Checks should be made out to The American Phytopathological Society.

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on
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WEEDING!**

FILL IN
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**FREE SAMPLE
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(enough to treat
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Sesone kills weed seeds as they sprout. It saves hoeing and weeding by preventing annual broadleaf and grass weeds from getting a start. Use Sesone in your well-established strawberry fields following a clean cultivation in spring, summer, or fall. It will not harm strawberry leaves.

For best results in new plantings, start using Sesone no sooner than 10 days after setting, to allow plants time to get established. In the bearing year, start Sesone application as soon as the ground can be worked, and use it monthly after cultivation except during the week before picking starts. Each application keeps out weeds for three to six weeks. If soil is dry, irrigate lightly after treating, but use water sparingly. By using Sesone, you'll save most of your weeding labor . . . and have easier picking of a bigger, better crop.

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I grow strawberries for ☐ sale ☐ plants ☐ home use.

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Berries

STRAWBERRIES

Outstanding Varieties

EARLIDAWN appears to be the most outstanding early strawberry for commercial production in two years of tests in Indiana. The variety also rated high in most of the desirable characteristics.

Pocahontas is still the leading mid-season variety. However, no single late-season variety can be unconditionally recommended. Armore is probably the most outstanding for size, quality, and yield, but it may prove too soft in wet harvest seasons. Tennessee Beauty and Sparkle are excellent in most respects, but they have small-sized fruit after early pickings.

Redglow or Vermillion may prove satisfactory for limited local sales when high quality may be of prime importance. Similarly, Catskill is recommended as a large, showy berry.—*Jules Janick and E. B. Williams, Dept. of Hort., Purdue University, Lafayette, Ind.*

Capping Machine

PROCESSORS are still taking a hard look at the strawberry capping machine developed by University of Tennessee and now manufactured by Hires, Castner & Harris, Inc., 2518 Morris St., Philadelphia 45, Pa. Current price for the custom-made machine is around \$8000.

J. J. Bird, associate horticulturist at the university, Knoxville, reports that the machine caps Beauties most perfectly, up to 97%. Blakemore rates next. Shipper, Dixieland, and Pocahontas do not successfully cap on the machine—about 65%. Varieties such as Pocahontas, which are highly susceptible to leaf diseases which also kill the cap, reduce the efficiency of the machine.

When berries are capped in the field by hand, pickers generally leave the cap on the stem for speed, and use two hands for picking each berry.

Tennessee growers have found that payment of 5 cents a quart for picking with caps and 7 cents with caps off represents pretty accurately the labor difference in the two operations. When the processor has a capper, he pays 1 cent less for uncapped berries from the grower.

There is some question whether this 1 cent penalty is justified since berries with caps on hold better in warm weather when loads pile up at the receiving plant.

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FERMATE®—The time-tested, economical fungicide for red varieties
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Season after season for over 16 years, Du Pont "Fermate" ferbam fungicide has given effective, low-cost protection against scab, rust, frog-eye leaf spot and more minor diseases than any other fungicide. Mild "Fermate" sticks to fruit and leaves, re-distributes well, contributes to deep green, healthy leaves—as on the McIntosh tree to the left—and increased yields of finer fruit. For versatility plus economy in your cover program on red varieties, Du Pont "Fermate" can't be beaten.

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Du Pont "Thylate" thiram fungicide controls scab, rust and more apple diseases than any other fungicide. Light-colored "Thylate" can be used on all varieties and gives a fine finish to all of them—even to tender varieties like Golden Delicious. With "Thylate," russetting is no problem. Try Du Pont "Thylate" in your cover-spray program—it's available at a new reduced price to give economy-minded growers complete control of apple diseases, plus fine fruit finish. The exceptionally fine finish of the Golden Delicious to the left resulted from using "Thylate."

PARZATE®—Lasts a long time for effective control of summer diseases of apples
zineb fungicide

Growers in the areas shown on the map to the right will want to take advantage of Du Pont "Parzate" zineb fungicide in their cover programs. Most of these states recommend one pound of "Parzate" zineb plus another fungicide in two or more cover sprays because "Parzate" is longer-lasting for effective control of (1) secondary (summer) scab; (2) sooty blotch and flyspeck. "Parzate" is also a recognized high-finish fungicide and may be used on both Golden Delicious and red varieties. When you buy zineb, ask for Du Pont "Parzate" zineb.

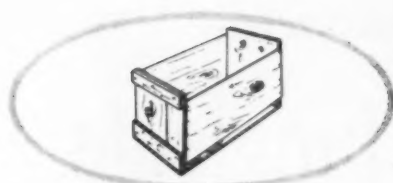


On all chemicals, follow label instructions and warnings carefully.



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City _____ State _____



By HENRY BAILEY STEVENS

They Ate Their Toothbrushes

WHEN some 16,000 dentists attending a recent annual convention in Chicago visited the exhibit hall, they got a pleasant surprise.

They had long been hardened to the claims of competing dentifrices such as Yapanay, to which chlorophyll has been added; Blowsown, which froths with lanolin; or Frisky which contains super-x. But here, arranged by their hosts, Chicago Dental Society, was a great bank of rosy apples displayed under the slogan, "Eat Your Toothbrush." The arrangement was flanked by the compelling picture of a boy with his irresistible bite, as well as attractive new teaching units issued by National Apple Institute. Best of all (it took some doing by Washington State Apple Commission) were plenty of apples for the dentists to practice on.

The exhibit was an important sequel to the movie entitled, "Gateway to Health," featuring the apple adventures of Dr. Fred D. Miller, of Altoona, Pa., and it probably means that the dentist will be the best friend the apple industry has had for a long time.

This column offers a prize of \$10 for the best report of an interview with your local dentist or teacher on "Apples and Dental Health." Tell us if you want it to be anonymous.

An Old Barrymore Symbol

NOR is dentistry the only susceptible profession. On the evening when Diana Barrymore was making her stage debut, father John arranged to have delivered to her, along with his congratulatory telegram, a big red apple. It was an old Barrymore symbol, a token of good luck which members of the family always sent each other on opening nights.

Strictly for the Birds

By Eunice Brannum Souder (Augusta, Kan.)
Canaries hop from perch to perch,
Expressing joy in runs and trills,
Twittering with a lettuce leaf
Like women with reducing pills.

Address your "Windfalls" contributions to
Henry Bailey Stevens, AMERICAN FRUIT GROWER,
Willoughby, Ohio.

TEW

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Irrigation Pumping Units
FOR MORE WORK AT LOWER COST

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Stone Fruits

PEACHES

Replanting Trees

PEACH trees are more easily established on new land than if planted shortly after the removal of an old peach orchard. The difference in performance if planted in an old orchard may vary from an almost undetectable suppression in growth to a heavy mortality, with many of the surviving trees stunted in growth or injured by canker.

The problem seemed more prevalent in the extremely dry years from 1952-54 when a severe moisture deficiency developed in late May and June.

An association between the lesion nematode and replant difficulties has been established in southwestern Ontario, and very encouraging responses to field fumigation were noted. Some rootstocks are being found which are effective in reducing the replant problem but much remains to be learned.

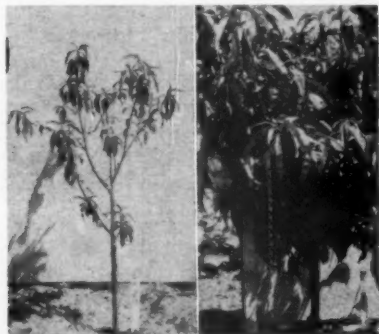
If the orchardist does not wish to fumigate nor wait three or four years until the replant effect has disappeared, then possibly remedial treatments at and shortly after planting might assist in the rapid establishment of the young trees.

It is assumed that only high grade nursery stock will be used and that planting will be done carefully just as soon as possible in the spring. It may be worthwhile to try one or more of the following remedial treatments during and after planting:

1) Place about the roots 1 bushel of soil high in organic matter, preferably obtained from a field or fence row which has not grown peaches.

2) Two gallons of starter solution such as 10-52-17 (3 pounds in 50 gallons water) may be added at planting, or two ounces of ammonium nitrate hoed-in around the tree shortly after planting.

3) Some benefit has been derived



Comparison of Golden Jubilee peach trees on untreated replant site (left); treated (right).

MAY, 1958

STOP

THE LEAF-SPOT PLAGUE

Actispray*

SOLUBLE ANTIBIOTIC TABLETS



effective
leaf-spot
eradicant
before
during and
after harvest

Actispray, the new antibiotic fungicide, effectively controls leaf-spot disease in both sweet and sour cherries. Since it may be applied up to 4 days before harvest, its protective action lasts through the harvesting period.

ACTISPRA—

Acts rapidly Actispray kills the established fungus within one hour after spraying.

Kills the established leaf-spot infection By actual test Actispray is one of the most effective leaf-spot eradicants. This eradication action provides for long term protection.

Keeps trees healthy Once Actispray removes the burden of the leaf-spot fungus, the tree

becomes more vigorous and should be able to form more fruit of higher quality.

Easy to use Simply drop the easily dissolved tablets into the spray tank with agitator running, then spray.

Economical Just one tablet added to 100 gallons of water makes enough 1 ppm solution to treat 25 trees. Every drop of the solution is active.

Does not stain . . . leaves no visible residue Actispray is also recommended for non-bearing trees, nursery stock, and transplanted trees one to two years old.

Actispray antibiotic tablets are supplied in convenient glass tubes, 24 tablets to a package.

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Upjohn

Actispray is a product of

THE UPJOHN COMPANY, CHEMICAL SALES DIVISION, KALAMAZOO, MICHIGAN



For All-Season Scab Control Insist Upon Captan 50-W

To Stop Powdery Mildew Add Stauffer's Mag 70 Sulfur

Nothing controls scab from pre-pink to harvest, like Captan.

In pre-bloom sprays, combine Captan and Stauffer's Mag 70 sulfur paste to knock out mildew. Use Karathane* instead of sulfur in post-bloom sprays.

Captan not only stops scab, but also checks fruit rots and other summer diseases. It pays for itself many

times over in better quality fruit . . . fancy finish . . . heavier harvests.

An all-season Captan spray program makes sense because it makes more money for you . . . not only this year, but in years to come.

Your local dealer has free Captan Spray Charts for apples and peaches. They tell you what sprays to use and when to use them. Ask him for your free copies today. Or write Stauffer Chemical Company, 380 Madison Avenue, New York 17, N. Y. *Reg. TM



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from four monthly applications of 2 gallons of an insecticide made by adding 1 ounce of 50% gamma isomer of benzene hexachloride, available under various brand names, to 100 gallons of water. Apply at planting and in May, June, and July.

4) Cultivate and hoe about the trees until mid-July to reduce competition for moisture and soil nutrients, particularly nitrogen. Water should be applied occasionally if the trees appear to need it. A mulch of some kind such as corn cobs has been found beneficial.

The above precautions may, in the absence of a severe replant problem, result in a young orchard of satisfactory vigor. Resort to fumigation or resistant rootstocks may be necessary if the difficulty still persists.—T. B. Harrison, *Experimental Farm, Harrow, Ontario, Canada.*

CHERRIES

Difficult to Check

CHERRY fruit flies have been somewhat difficult to check. The adult stage of the fly is the only period when it is vulnerable to insecticides and, because it lays eggs in ripening fruit, the matter of spray residues at harvest must be considered.



Adult black cherry fruit fly. Photo: courtesy of Dr. James A. Cox, Penn. State University.

The adult flies are active on bright warm days in early summer and appear to feed on the juices exuded by punctured fruits, secretions of aphids, or drops of dew clinging to the fruit or foliage. As adults, the flies spend about 10 days in the trees from the time of emergence until the females start depositing eggs in the ripening fruit. Incubation takes about five days.

Lead arsenate has proved entirely satisfactory for fruit fly control, but spray residue problems have stimulated interest in other insecticides. Among those which have been used are parathion and EPN or a split schedule of one spray of lead arsenate

AMERICAN FRUIT GROWER

and two of parathion and EPN.

The organic phosphate materials have demonstrated their effectiveness in reducing heavy populations of cherry fruit flies. Tests reveal that Diazinon 25% W.P. when used at the rate of 2 pounds to 100 gallons of spray is an important weapon.

In addition, Diazinon may be used up to 10 days prior to harvest without danger of harmful residue deposits on the fruit.

PLUMS

Good Diversifying Crop

THERE is no question that, through planting better plum varieties adapted to local growing conditions, it is possible to produce good crops of high-quality plums in Ohio.

Tests at Ohio Agricultural Experiment Station, Wooster, revealed that European-type plums were the best. This group included many of the best fruits for eating out of hand and for canning. Trees were vigorous, with strong, upright growth habit, and productive.

Earliest recommended variety of this group is Bradshaw. However, quality is only fair.

The Imperial Epineuse variety produced the highest quality fruit of those tested. Unfortunately, fruits are an unusual reddish-purple color, unappealing to some consumers.

Three desirable blue prune-type plums that are harvested near the end of the Elberta peach season are Stanley Prune, German Prune, and Italian Prune. They are all freestones and are popular for home canning. The last of the recommended plums in the European group is Reine Claude.

Varieties in the Damson group were as dependable as the European-type plums. Fruits of this class are quite tart and suited for culinary purposes only, particularly for preserves.

Shropshire and French Damsons proved to be well suited to Ohio conditions. Fruits of both were oval, blue, and semi-freestone. Both were productive. Damson-type plums should never be planted extensively because of a limited market.

Japanese-type plums did not prove generally satisfactory for Ohio. The main difficulty was their early blooming habit which made them particularly susceptible to the hazard of early spring frosts.

Japanese-type plums are not suited for commercial production in the state, but do make interesting novelties. The better varieties for Ohio are Methley, the earliest selection tested; Burbank; and Formosa.—*R. G. Hill, Jr., Ohio Agricultural Experiment Station, Wooster.*

MAY, 1958



Now Captan keeps crops in top shape even after harvest

New official tolerances for residues—up to 100 parts per million—now permit use of Captan 50-W anytime. So use this effective, tested fungicide before, during and after harvest.

Spray and pick your fruits and vegetables the same day. Or treat days later for a new kind of pre-market protection. It's now possible with remarkable Captan 50-W.

Captan 50-W stops gray mold, brown and soft rots. It also controls

scab and other destructive organisms. Your crops stay in top condition longer. *Even after months of storage* you are able to get fancy prices usually paid only for fresh produce.

Your local dealer has a lot more information on Captan 50-W. Ask him for your free copy of our Captan Apple and Peach Charts. Or write: Stauffer Chemical Company, 380 Madison Ave., N. Y. 17, N. Y.



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This Nursery Model FITCHBURG CHIPPER Eliminates Brush Hauling



Makes Low Cost Mulch

The next time you haul or burn prunings, remember a Fitchburg Chipper will quickly chip your prunings to eliminate hauling... provide plants and shrubs with a protective moisture cover to guard against summer dry spells, or protect your evergreens from winter drying.

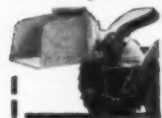
The nursery size Fitchburg Chipper is inexpensive. Yet it converts nursery prunings, waste wood, into a long-lasting, moisture-holding mulch that stays put, won't burn or blow away. It lasts year after year and gradually breaks down into humus.

Model C5 is widely used by orchardists and nurserymen. This model is operated by means of the tractor power take-off. A Fitchburg Chipper gives you "on the spot" convenience on most wheel-type tractors.

The patented spring-activated feed plate, a Fitchburg exclusive, completes the safe, single operator chipping equipment. Each limb is held tightly against a cutting head. With the spring-activated feed plate, you chip brush in various sizes up to its rated capacity with equal effectiveness. There is less shock to the cutting edges, the tough, chrome steel knives stay sharp longer. Chipping goes faster.

FREE CHIPPER FACTS

Write Fitchburg today for free Chipper Facts. Know how a Fitchburg Chipper can save you man-hours and give you low-cost mulch, besides. Tell us how many acres and the type of nursery stock you have, and we will send you the proper literature and prices on models best adapted for your work. The coupon is for your convenience.



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PLEASE SEND facts about Fitchburg Chippers suitable for nurserymen—also prices. We have _____ acres of _____ nursery stock to prune.

We have a _____ Tractor.

Name of Nursery _____

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Town or City _____ State _____

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Don't be perplexed! Send us your questions—no matter how big or small. A three-cent stamp will bring you an early reply. Address: The Question Box, AMERICAN FRUIT GROWER, Willoughby, Ohio.

PLASTIC BERRY BASKETS

Who makes plastic berry baskets?—Maryland.
Allied Plastics Co., 6231 So. Manhattan Place, Los Angeles 47, Calif., and names of additional suppliers are available from Plastic Sales Dept., Dow Chemical Co., Midland, Mich.

BAN ON BLACK CURRANTS

I hear that I can't buy black currant bushes. What is the reason for this?—Ohio.

There are specific regulations governing the planting of currants and gooseberries in the state of Ohio. Black currants (*Ribes Nigrum* L.) have been declared a public nuisance and cannot be grown. Also, the growing of other species of currants and gooseberries is prohibited in certain areas near white pine stands. The reason is that the *Ribes* (currants and gooseberries) are the alternate host for the blister rust which is devastating to the white pine.

BLACKBERRY CULTURE

Is there information I can send for which would help me with blackberries?—North Carolina.

Write to the Superintendent of Documents, Government Printing Office, Washington, D. C., and ask for Cat. No. A19:1995, *Growing Erect and Trailing Blackberries*. Send 15 cents (coin) to cover cost.

NEW VARIETIES WANTED

Where can I buy Stearns and Northneck peach plum varieties?—Michigan.

Write to George Graves, Vineyard Haven, Mass.

Earlirl apricot?—Oregon.

This variety of apricot will be available in the winter of 1958-59 from the following nurseries in the state of Washington: Van Well Nursery, Wenatchee; May Nursery, Yakima; Heath Nursery, Pateros; Gordon Nursery, Spokane; Charles Morrison, Zillah; Douglass Nursery, Tonasket; Crandall Nursery, Orient; and from Arneson Nursery, Canby, Ore.; Settlemier Nursery, Albany, Ore.; Grant Merrill, Red Bluff, Calif.; Mt. Arbor Nursery, Shenandoah, Iowa.

Gracious plum?—Iowa.

Available in the fall of 1959 from Oscar H. Will & Co., Bismarck, N. D.; Fillmore County Nursery, Canton, Minn.; Shenandoah Nurseries, Shenandoah, Iowa; and Mt. Arbor Nurseries, Shenandoah, Iowa.

COLD STORAGE STRAWBERRY PLANTS

How late in the summer can one plant cold storage strawberry plants and still get growth enough for a good yield by the bill system the next June? Is there a deadline after which setting results in much lower yields?—Massachusetts.

According to the work of John Worthington, Beltsville, Md., cold storage plants will produce satisfactory crops if planted any time from April to August. They must, however, be fully dormant. The yields are progressively lower from April to August, as one might expect, but a good yield can be obtained by planting as late as August 1. Plants that are set in June, however, yield considerably higher than those set August 1.



Unique 3 point mount arrangement, heavy duty steel tank with 100 gal. capacity and mechanical agitator now makes it possible to do a complete orchard spray job in the smaller orchards, and unnecessary to bring out the big machines for those small jobs in the larger orchards. With the addition of a Wanner Pump, putting out up to 12 gals. per minute and 500 lbs. pressure, you are ready for any spray job in the orchard or field.

PAK-TANK only \$125.00

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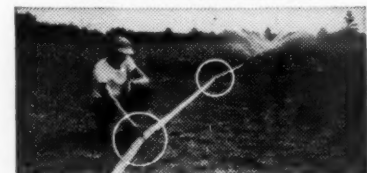
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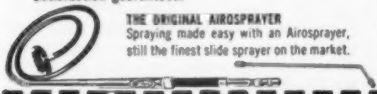
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- SPRAYS DIRECT FROM CONTAINER
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Save time and money with New Power Aerosprayer. Its one-man portability lets you do a quicker spraying job. Ideal for trees, gardens, and cattle. Operates from ground, truck, or any solid base. Satisfaction guaranteed.



THE ORIGINAL AIROSPRAYER
Spraying made easy with an Aerosprayer,
still the finest slide sprayer on the market.

Attach This Order to Letter or Card with Name and Address

Send me an Aerosprayer (\$8.40 east of Denver, \$8.75 west, p.p.d. or C. O. D. plus charges).

Send me Power Aerosprayer (\$133.95 complete with 1 1/2 h.p. Briggs & Stratton engine, F. O. B. Neodesha, Kansas).

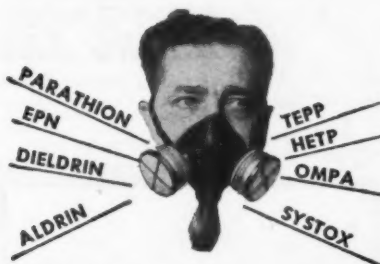
Send me additional information on Aerosprayer—Power Aerosprayer—and name of dealer.

AIROSPRAYER COMPANY

DEPT. A

NEODESHA, KANSAS

This Respirator Protects Against 8 Toxic Sprays

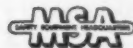


THE M-S-A FARM SPRAY RESPIRATOR

Here's the one Respirator that makes outdoor spray programs safer. New type filters keep users on the safe side of toxic sprays. Replaceable with in-use M-S-A Farm Spray Respirators. Accepted by U. S. Government Interdepartmental Committee on Pest Control. Write for details.

M-S-A GMC-1 INDUSTRIAL GAS MASK—For heavier mixing concentrations of all the above organic insecticides. "All-Vision" facepiece gives full facial protection—maximum vision.

DEALERS WANTED—Current customers are your best prospects. Cartridge and filter replacements mean repeat business. Write for details.



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MAY, 1958

Nuts

Pecan Empire

THE largest grove of cultivated pecan trees in the world flourishes on 4000 acres of irrigated land in the highlands of New Mexico.

Stahmann Farms, Inc., harvested and processed some 3.5 million pounds of shelled pecans last year from 96,000 trees. The average age of the trees is 18 years, and estimates place production at 10 million pounds within seven years.

Directing the over-all operation is Deane F. Stahmann, Sr., who started the enterprise in 1926 with 150 acres. His sons, Deane, Jr., and William, assist him.

Pecans are produced here through controlled irrigation conditions. Diseases and insects are at a minimum in the area's high, dry climate. Irrigation is supplied by Rio Grande River reservoirs. When there is no water, 20 wells on the farms can produce 2500 gallons a minute each.

Del Cerro, Spanish for "of the highlands," is the trade name for Stahmann pecans.

Citrus

Frost Detector

THE first potentially practical method for mechanically detecting frost damage in citrus fruit has been developed by engineers at University of California, Los Angeles.

The machine measures frost damage by beaming X-rays through fruit rotating on a platform. The resistance encountered by the X-rays is registered as a voltage reading. As the damage done by frost increases, the voltage reading increases due to the non-uniformity encountered by the X-ray. Non-uniformity of fruit sections is characteristic of frost damage.

The frost damage detector was designed by William T. Kyle, assistant research engineer, and Joseph E. McAteer.

Kyle believes a commercial model could be built to handle 10 fruits per second.

Cost of a commercial model would be \$10,000 to \$20,000, Kyle estimates. In addition to an X-ray source and an electronic device for measuring resistance variations, a commercial machine would include devices for channeling fruit from a conveyor belt into the damage detector. Bad fruit would be ejected automatically.



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CASH ON-THE-SPOT

(Continued from page 11)

orchard and given a set of mimeographed instructions which covers conduct in the orchard, how to pick and handle the fruit, how to handle ladders, and where ladders, baskets, and other equipment may be found.

No smoking is allowed in the orchard because of the danger of fire.

The head of each family group is asked to sign a "release form" which minimizes the legal liability of the orchard operator in cases of loss, damage, or injury while the customers are in the orchard.

Fruit is checked as the customers leave the orchard. Apples are removed from the top of baskets which have been heaped up, and extra apples are added to those baskets which do not contain a full bushel of fruit. This "heaping up" of baskets is always a problem but Bell seems to handle it diplomatically. Anyone who objects too strenuously may have his "permit" card destroyed and be asked not to return.

The measure of the success of such a program, of course, is the question, "Does it sell the crop at a fair profit to the grower?" Bell is more afraid of running out of apples than he is of not selling the crop.

At the time of my visit to the orchard last fall, the McIntosh and Starking Delicious had been almost completely harvested and the picking of the Jonathan and Golden Delicious crop was well underway. The use of hormone sprays to make the apples stick on the trees has been helpful in reducing the loss of fruit from drop, but even with these sprays, an early frost may result in some loss of Jonathan and Golden Delicious as a result of drop.

Even the drops are sold by allowing people to come in after the fruit is off the trees to pick up drops at \$1.25 per bushel. With the heavy mulch used, the dropped apples are not badly bruised and many perfect fruits can be selected with a little care. What is left is picked up for making cider in a modern cider press at the orchard.

Bell reports that there are many women and children picking during the week days. He moves about 350 to 400 bushels per day during the week. Some 750 to 1000 bushels are sold on peak Saturdays and 1500 to 2000 bushels or more on Sundays. The physical facilities required to handle such crowds are difficult to anticipate.

To handle the week-end crowds, Bell sets up one-way traffic into and out of the orchard and uses five or



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The AP-PEACH PICKING BAG

Saves Time — Reduces Bruising
Heavy canvas over rigid frame protects fruit. Empties quickly through bottom. Especially for peaches and easily bruised apples. Write for folder.

JOHN C. BACON CORP., GASPORT, N.Y.

For all your

**SPRAYER
NEEDS**

It's Still . . .



Manufacturing Corp.
GASPORT, N.Y.

six people at the exit to check out the cars.

But even this system has been too slow. The first Sunday last year found cars lined up for almost a mile back into the orchard waiting to be checked out. Two young men pulled up to the check-out point without any apples to explain, "We didn't want any apples. We only followed the traffic to find out what the excitement was about and are just trying to get out again!"

Bell is taking steps to speed up the handling of cars and the checking out of customers so that this undesirable situation does not happen again this year.

Selling prices will, of course, vary from year to year. In 1957, the McIntosh and Jonathan were sold for \$2.50, and the Red Delicious and Golden Delicious for \$2.75 per bushel. There has been no customer resistance to these prices as evidenced by the fact that the average purchase is about 2½ bushels per car, with many pickers taking as many as six or eight bushels.

The price per bushel is well above what many growers received for packed and graded fruit on local or regional markets. Bell's system saves the cost of picking, hauling, storage, grading, packing and the package costs, and gives a higher return for

SAVE! with HOME-CANNED PEACHES

QUICK COST ESTIMATOR

PEACHES PER BU.	EST. FROM BUSHEL (A)	PEACH COST (B)	SHARP COST (C)	AND 5 PEB. PER (D)	HOME-CANNED PEACHES (E)
\$1.00	20	5¢	3¢	3¢	11¢
\$1.50	20	7½¢	3¢	3¢	13½¢
\$2.00	20	10¢	3¢	3¢	16¢
\$2.25	20	11¼¢	3¢	3¢	17¼¢
\$2.50	20	12½¢	3¢	3¢	18½¢
\$2.75	20	13¾¢	3¢	3¢	19¾¢
\$3.00	20	15¢	3¢	3¢	21¢
\$3.25	20	16¼¢	3¢	3¢	22¼¢
\$3.50	20	17½¢	3¢	3¢	23½¢
\$3.75	20	18¾¢	3¢	3¢	24¾¢
\$4.00	20	20¢	3¢	3¢	26¢

NOTES: (A) Total is generally 18-24 quarts of home-canned peaches per bushel. (B) Cost per lb. based on 18-24 quarts (18-24 lbs.) plus replacement lids (average 2¢ per case). Total cost per case (average 1¢). (C) Based on 18-24 quarts (18-24 lbs.) plus replacement lids (average 2¢ per case). Total cost per case (average 1¢). (D) Based on 18-24 quarts (18-24 lbs.) plus replacement lids (average 2¢ per case). Total cost per case (average 1¢). (E) Based on 18-24 quarts (18-24 lbs.) plus replacement lids (average 2¢ per case). Total cost per case (average 1¢).

PROTECT FLAVOR BEST WITH
CREAM-WHITE ENAMEL LINING of



PEACH SALES BOOSTER

Here is a "gimmick" which will help boost sales of peaches at your roadside stand this summer. The "Estimator" tells at a glance how little it costs to home-can peaches even when they are selling at top market prices. Actual size of the Estimator card, printed in two colors (red and black) on sturdy stock, is 11 x 17 inches. Write Ball Brothers Company, Box 729, Muncie, Ind., for one or more cards. They're free.

the fruit itself. This method is not a way to sell poor apples at cut-rate prices, but a way to build up an an-

nual business for fresh, high quality fruit with a higher return to the grower. Bell feels very strongly that this program is an excellent way to promote apples and to increase the per capita consumption of the apple.

Mrs. Bell is also doing a fine job of apple promotion as well as advertising Mossley Hill Orchards in her work with groups of Boy Scouts, Girl Scouts, 4-H Clubs, elementary school classes, and other groups of young people who visit the orchard.

These young people are given a tour of the roadside stand, the orchard, the packing shed and cold storage, and leave with a free bag of apples and a new insight into apple growing and how good apples are for them. Here are the apple eaters of future years and time spent with them now is considered by the Bells to be effective, long-range promotion.

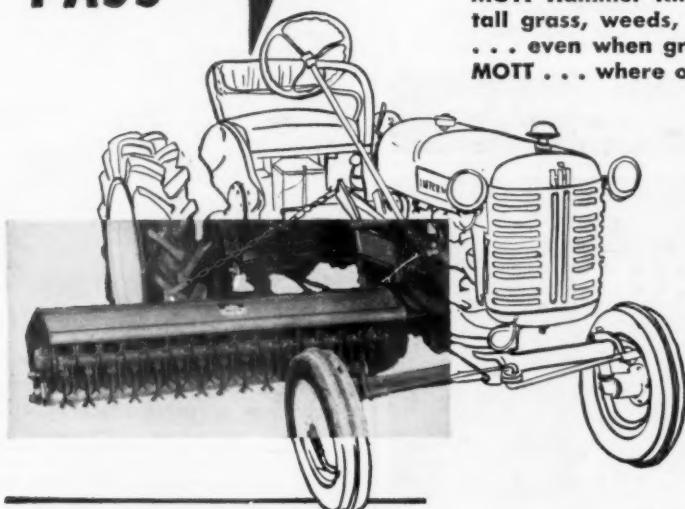
The "pick-your-own" system of marketing has definite requirements in order to be successful. These include: 1) a good location on a well-traveled highway near a metropolitan area, 2) few other competing orchards in heavy fruit growing areas, 3) a good selection of popular varieties ripening throughout the harvest season, 4) fruit practically free of defects, 5) a large mailing list kept up-to-date, and 6) a sense of humor and infinite patience! THE END.

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Clean, Neat... In less time... At lower cost!

MOTT Hammer Knife Mowers cut and shred tall grass, weeds, light brush and seedlings... even when ground is wet. Mow with a MOTT... where others cannot!



Shown is 48" MOTT Hammer Knife Mower with off-set underslung tractor mounting. Also available for center and rear-hitch mountings in 4, 5, and 6 ft. cutting widths or self-powered gangs up to 19 ft. For simple, easy lawn care, 18" and 24" (walk behind) models. In all, 25 MOTT models to choose from.

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For an amazing demonstration of the MOTT Hammer Knife Mower, see your local dealer, today!

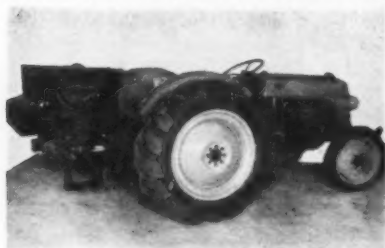
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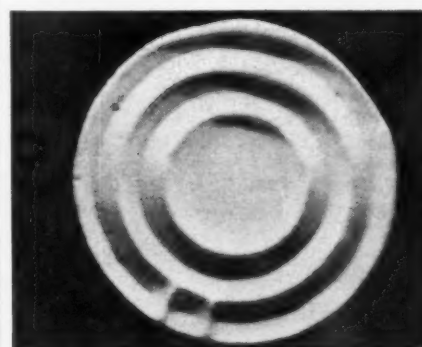


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NEW FOR YOU



Speed Peach Packing

Peach growers in South Carolina and Georgia are using a new contoured peach ring facer pad which is cutting their packing costs and goes a long way towards protecting the easily bruised fruit. The contoured ring was developed by Jerold Pittman, of Clemson Agricultural College, in conjunction with Toy Hyder, of South Carolina Peach Growers Association, and D. E. Dahle, manager of High Point Products Co. At the recent National Peach Council meeting in Columbia, S. C., growers were delighted with the new product. You should look into this worthwhile peach development and if you will write Wayne Scott, Fiber Conversion Co., P. O. Box 152, Station D, Atlanta 18, Ga., you'll get all of the facts.



Better and Cheaper

Growers will be pleased to know that a new tree wrapping has been developed which does a superior job at low cost.

Be sure to mention **AMERICAN FRUIT GROWER** when writing to manufacturers.

Two 25-foot rolls, 2 inches wide, sell for 49 cents. Here is an excellent way to protect your young trees from rodents. Try the product—write Rhopac, Inc., 3425 Cleveland St., Skokie, Ill.

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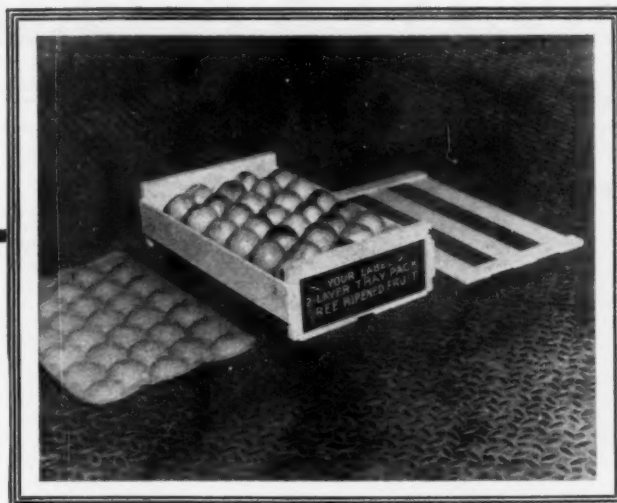
Down in Georgia, peach growers are enthusiastic about a new offset rotary cutter. The machine has been orchard tested and designed to operate most efficiently in orchards of all types. The machine is offset so that it is easily pulled under the trees and cuts a swath 90 inches wide, mowing-mulching and chopping prunings into bits and pieces for the enrichment of the orchard floor. You'll want more information on this special orchard cutter. If you write Bill Hoffman, Lilliston Implement Co., Albany, Ga., he will send you full details.



Peach Disking

Peach growers in the Southeast are using a new tree hoe which does a wonderful job. Designed by people who know fruit growing, the machine is the result of many years of development in actual orchard work. Results of use prove the new hoe improves moisture, makes nutrients more available, increases organic matter, prevents loss of plant food and top soil by erosion, and maintains soil porosity. These factors, plus other advantages, increase yields and peach quality. If you will write Eugene Hudson, McDonough Power Equipment, Inc., McDonough, Ga., he will gladly send you all of the facts.

MAY, 1958



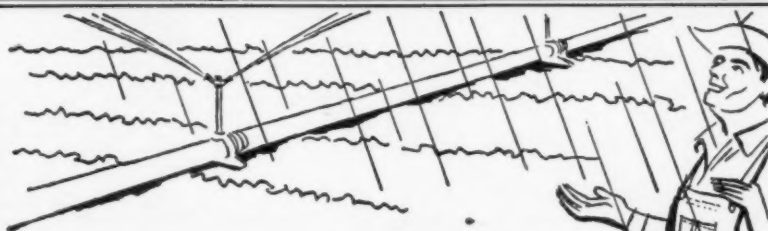
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IDEAL PLACE FOR RETIRED COUPLE TO make good living. 400 bearing apple trees, 700 semi-dwarfs. Established roadside business. New brick ranch home, storage, orchard equipment. FRANCIS CARGO, Manchester, Michigan.

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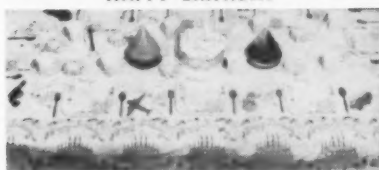
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PACK consists of 99 Colorful Items of the following—
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STATE NEWS

(Continued from page 14)

igan State University horticulturist, secretary-treasurer.

Dr. H. B. Tukey, head of MSU horticulture department, outlined the history of the dwarf rootstock. Dwarf plantings were tried as far back as Alexander the Great, he said. But until some 40 years ago, little standardization of dwarf rootstocks took place. Since then, 17 different dwarf rootstocks have been standardized at East Malling Research Station, East Malling, England.

Dr. Tukey was one of the first research men to bring dwarf rootstock to the U. S. Research began at New York Agricultural Experiment Station, Geneva. From his work there, dwarf rootstock numbers I, II, VII, IX, XIII, XVI were found to be best suited to this country.

Three fruit growers gave their opinion on care and commercial value of dwarf plantings.

Lorne J. Doude, Wabash, Ind., said that he obtained best results with little pruning.

Ed Mawby, Grand Rapids area grower, reported that in comparison with standard trees he could produce a higher percentage of well-colored apples on dwarf plantings, as well as cut operation costs.



Attending the organizational meeting of dwarf fruit tree growers were, left to right, Wallace Heuser, Ray Klackie, H. B. Tukey, all of Michigan, and L. V. Doud of Denver, Ind.

Wallace Heuser said that he found dwarf trees should be headed quite low after they have been planted so that they will not become topheavy.

Dr. Ronald Tukey, Purdue University, son of H. B. Tukey, reported that dwarf plantings seem to respond differently under different soil conditions.

The biggest tree formed in their work in Indiana was on Malling XIII, he said, while Michigan research showed that Malling XII grew the largest.

Yields at Purdue averaged 16 bushels per tree, with 72 trees planted per acre. Total yield per acre, then, would be 1150 bushels, a high yield compared with standard plantings. However, Dr. Tukey stated that yield was not the most important factor. Dwarf plantings produce 20 to 30% more U. S. Fancy grade apples.

He pointed out that in his work, dwarf trees were harder to grow and needed higher requirements of fertilizer than standard trees. As many as 10% of the trees in some plantings had to be replanted.—Leonard J. Hill, Lawton, Mich.

Small Fruits Day

OHIO—Small Fruits Day has been scheduled for June 12 at Ohio Agricultural Experiment Station, Wooster, for commercial and amateur growers interested in strawberries, raspberries, grapes, and blueberries. The program begins at 9:30 a.m. and continues until 3:30 p.m.

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A Better Mouse Trap Not Enough

THERE is no doubt that a superior product has the advantage in sales over an inferior product. It is also true that to promote a poor product eventually leads to trouble.

Yet, the day is seemingly past when an industry can merely develop a good product and then wait for the world to come and get it as it is supposed to do with better mouse traps.

The reason is, of course, that competition between quality products to-

day is intense. No longer is there just a poor and a good mouse trap from which to choose. Instead, there are dozens of good mouse traps and there are other competing products.

All of which supports the contention of Washington state apple growers and Michigan cherry growers, among others, that effective advertising, promotion, and merchandising are no longer matters of discussion—they are necessities.

What About Vertical Integration?

THE move towards vertical integration has become a stampede in some areas of agriculture. The whole idea is that an apple, a carrot, or a hen does not in itself know the difference between the grower, the handler, the retailer, and the consumer—as we have long contended—and that the

is contract farming beneficial or harmful? To find out, Agricultural Commission of American Bankers Association has undertaken a nationwide survey to determine the extent of contract farming, its effect on bank credit needs, and effects of the practice in agricultural communities. The study will include fruit production, where growers produce under contract with private or co-operative processors to reduce some of their marketing risks, management responsibilities, and control over production.

proper procedure is to take down the farm fence and dovetail all operations smoothly all the way from the planting of the seed and the laying of an egg clear through to the ultimate use by the consumer.

That these facts have finally come to the attention of agricultural economists, and that many are now extolling the virtues of "vertical integration" is one of the sweet mysteries of life.

First, they erected a tight gate at the farm and refused anyone to even so much as use the word "marketing" unless he was an economist. They developed a pattern of gobbledegook beyond the farm gate in the area of "marketing" that frightened away many able but timid souls and did a great deal of harm in market development besides wasting a lot of the taxpayer's money.

But now this is past, or is it? Maybe what we are now going to see is a swarm of agricultural economists climbing over the garden fence

and taking over agriculture from the top side down.

If this is vertical integration, maybe the fruit industry had better begin to look things over. Maybe the better procedure is for the grower to climb over the fence himself and control more of his products on the way to market rather than having some theoretical "do-gooders" from top side take him over and push him around.

Pages and pages will be written and speech after speech will be made on this interesting topic. We will soon print some stories ourselves on this topic as it may affect fruit growers. But our first advice to the fruit industry is to "take it easy," analyze the situation, recognize hot air when it rises, separate the wheat from the chaff, and adjust to any projected change in an orderly manner and not by a stampede.

Fruit Growing is Such Fun!



Fruit Talk

An interesting sign of "advancing civilization" is found in an English fruit booklet giving exact information on how to collect damages for broken glass from the Air Ministry following a "sonic boom" from supersonic aircraft.

Now it is "official"—the Connecticut General Assembly has eliminated reference to the barrel from grading regulations on the grounds that "the barrel, as a container for apples, has been obsolete for many years."

For planting, thinning, weeding, and some harvest operations, try mounting a frame across the rear of the tractor large enough to carry 6 to 8 workers prone, and propel the outfit by putting the power into the transmission through the power take-off so as to permit speeds as low as 3 feet per minute, say Hall, Curley, and MacGilliray of Davis, Calif.

Following the trend established for transporting sour cherries in cool water, it is now reported that blueberries can also be handled to advantage in water at 60° F.

California research workers have found an interesting effect of height of budding on citrus, in which malformed bud unions occur when lemons are budded low (ground level) on Cleopatra mandarin and Sampson tangelo rootstocks, but the unions are smooth and gum disease is reduced when budding is high (8 to 10 inches above the ground).

In the same vein, Hockey of Nova Scotia relates that low-budded Gravenstein trees are less subject to the flat limb virus diseases than are stem-grafted trees.

W. J. Lord reports an interesting "sales gimmick" used by a Massachusetts fruit grower at his roadside stand during February and March, namely, forced blossoming shoots of apple, peach, pear, plum, and cherry at a price, and dormant prunings free for forcing by the purchaser himself.

If you really want to develop a market, you must have quality control.

California Spray-Chemical Corp. has built a \$2 million facility in France for producing captan. In 1882, A. Millardet, of France, discovered Bordeaux mixture which was soon introduced to the United States. Now, 75 years later, we send the French captan, a new, improved fungicide which makes disease control more sure, does a better job. There is one interesting precaution the manufacturer makes to French growers. Captan must not be sprayed within 30 days of harvest. The material is not only an efficient killer of grape fungus diseases but also of bacteria which cause fermentation.

—H. B. T.

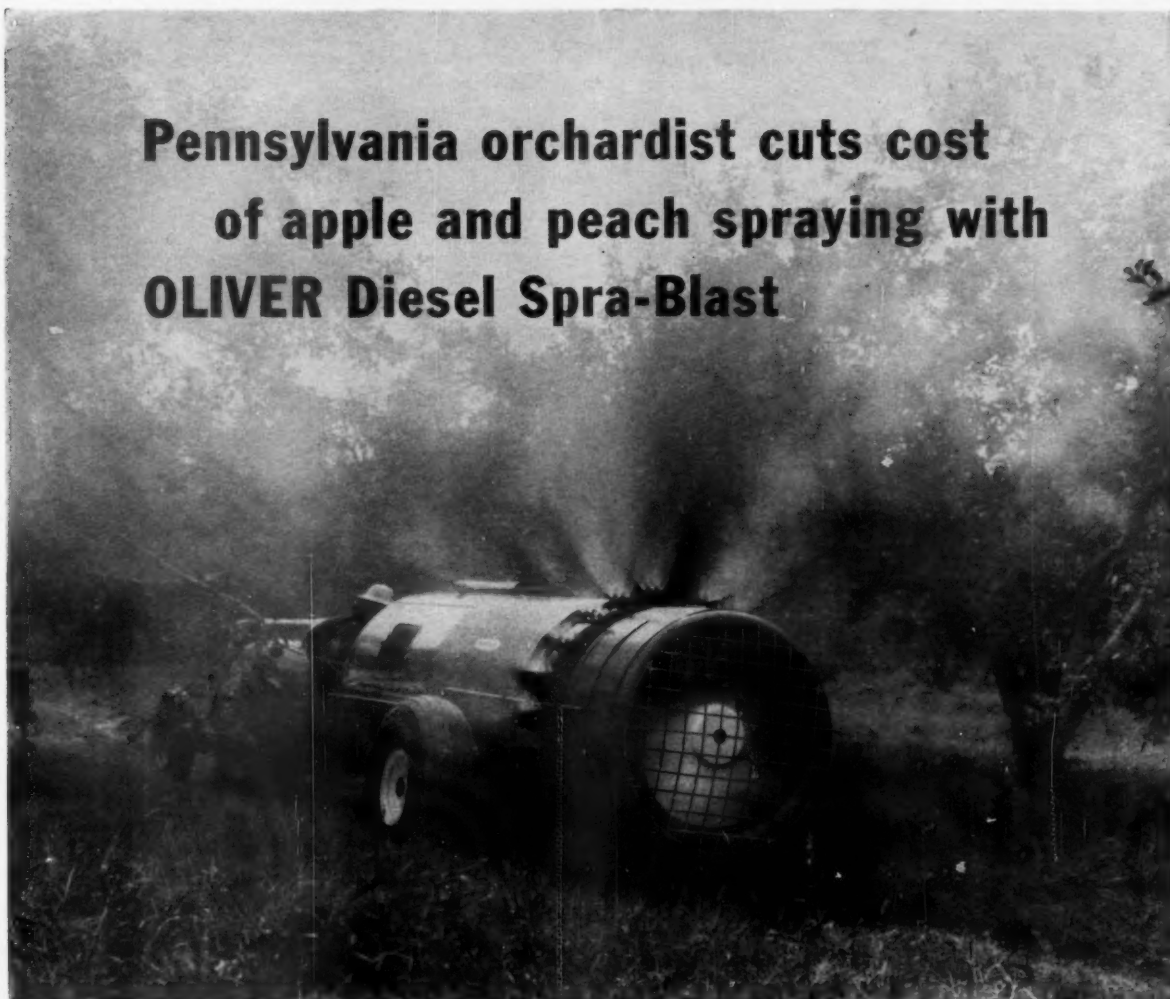
Coming Next Month

—Irrigation Issue—

- Grower Irrigation Experiences in California and New Jersey
- Early Peaches Color the South's Variety Picture
- Mechanicals for Peach Shipping
- Washington Pear Growers Prepare to Battle Psylla, Decline, Blight
- Integration or Independence—Must the Grower Choose?

AMERICAN FRUIT GROWER

Pennsylvania orchardist cuts cost of apple and peach spraying with **OLIVER Diesel Spra-Blast**



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Says: **Reno Apple**
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Comments like these are coming from everywhere—from users of the new Oliver Model 500 Spra-Blast. Big diesel savings in both fuel costs and maintenance expense have been recognized. Equally impressive has been the quality of spray coverage provided by Oliver's new slow-speed, high-output fan. It sets a new standard of efficiency—38-inch true air foil design, putting out 68,000 cubic feet of air per minute at 1850 r.p.m.

Low-cost dependability is what orchard and grove operators want, and that's what they get in the Model 500—plus big diesel savings, full coverage regardless of tree height, easy-to-service pump, corrosion-resistant 500-

gallon tank, stable maneuverability and easy turning.

See your Oliver Iron Age dealer right away and get full particulars on the new money-saving Oliver Model 500 Spra-Blast. The Oliver Corporation, 400 West Madison Street, Chicago 6, Illinois.

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In addition to its many other advantages, Glyodin has excellent wetting, spreading, and sticking qualities. Thus, Glyodin—a powerful fungicide—helps spread and hold other spray ingredients on foliage and fruit, and costs less than other commonly-used wetting agents.

Used in cover sprays, Glyodin controls scab and summer diseases such as sooty blotch and Brooks spot. It is ideal with ferbam for control of rust and

X-spot. And, when used regularly, it does such a good job of suppressing mites that special mite sprays may not be needed.

CRAG Glyodin improves the performance of some commonly-used insecticides for better control of codling moth, curculio, red-banded leaf roller, and green and rosy aphids.

Glyodin is a liquid that's easy to mix. It spreads and sticks and stays and pays in cover sprays. You can pay more but you can't buy another fungicide that offers you so many superior advantages. See your CRAG Glyodin supplier today!



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